VOLUME I

THE INDIAN BONSAI AESTHETIC

How Tropical Tree Biology Redefines the Art of Bonsai

Gilles Roszak

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DEDICATION

To my wife, who showed me the soul of the subcontinent; Veer Choudhary, whose hands-on mastery and revolutionary spirit carved a path for the sovereign Indian tree. This work is dedicated to you and to the ancient, enduring forests of India.

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PREFACE

A plea for the emergence of an authentically Indian bonsai aesthetic.

For a long time, the international bonsai community believed that the art of bonsai blindly obeyed Japanese rules. We were taught that a good bonsai should resemble a solitary pine growing on a cold and windy mountain. These principles no longer apply to the trees growing under the bright Indian sun.
When I saw the trees of India, I realized it would be very difficult to follow the rules I had learned in France. Tropical trees, for example, a banyan (Ficus benghalensis) or a tamarind (Tamarindus indica), don't grow like the trees we find in Europe; India's climate has forged a different growth pattern in them.
Despite the fact that there are officially four seasonson the subcontinent, two main characteristics are observed: sunlight and humidity. This is why the trees have a different shape. They grow straight, but also spread out to create significant shade and protect the ground below.
Trying to force an Indian tropical tree to adopt the shape (or style) of a tree from a temperate climate goes against their natural architecture, ecological adaptations, and patterns of growth. That would require significant adaptation. Even in a pot, a tree must grow the way nature intended.
An authentically Indian bonsai aesthetic should not seek to copy the magnificent styles and rules adapted to Japanese or European trees. Even cultivation practices should draw inspiration from ancestral Indian horticulture, most notably the principles of Vrikshayurveda.

This treatise argues for the legitimacy of an Indian bonsai aesthetic. I wish to demonstrate something of which I am absolutely convinced: it is necessary to work towards the emergence of an Indian bonsai aesthetic.

Gilles Roszak

Image 1: Tamarindus indica

A NECESSARY CLARIFICATION

1) Tradition and Innovation

The art of Penjing has lost none of its vitality since arriving in Japan from China over a millennium ago. It remains very much alive, steeped in Chinese philosophy and poetry as well as a profound admiration for the natural world.

Japanese bonsai is not merely a copy of Penjing; it represents a profound interpretation of it. As Japanese masters integrated Penjing into their own traditions, the art form evolved into a distinctively Japanese aesthetic characterized by clean lines, harmony, and a reverence for the beauty of aging.
Today, that same artistic evolutionary process is underway in India.

Just as Japanese artists did centuries ago, Indian artists are under no obligation to imitate the styles, techniques, or even the plant species of another country. India already possesses its own history of engagement with its ecosystem, its own artistic philosophy, and a vast diversity of trees.
Thus, by combining the ancestral wisdom of Penjing with the discipline of bonsai, India has the potential to achieve what was accomplished in the past in Japan and Europe: drawing upon existing influences to create a truly unique art form.

2) Biological Adaptation

I must clarify that when I say that Japanese and European bonsai styles are not suited to the tropical Indian climate, I in no way intend to diminish or deny the mastery of horticultural techniques they entail. Japanese aesthetics are among the finest expressions of botanical art. They require patience and dedication and are the fruit of centuries of practice.

European innovations undoubtedly enrich the art of bonsai, which has become global. Countless masterpieces inspiring practitioners worldwide are proof of this.

This treatise simply aims to demonstrate that, just as these traditions evolved in response to their own temperate environments and cultural contexts, Indian bonsai culture must acknowledge its own climatic realities, biological foundations, and philosophical heritage. It is in no way a question of rejecting Japanese models but of recognizing a different path, one that takes into account the tropical reality of the subcontinent and the wisdom of Vrikshayurveda.

What I am "fighting" is the universalization of a model designed for temperate climates.

THESIS STATEMENT

A bonsai aesthetic should emerge from the biological identity of the tree.

This treatise argues that bonsai aesthetics are not universal. They are the product of the biological, ecological, and cultural conditions in which the trees grow.

It proposes the existence of an Indian bonsai aesthetic, shaped by the growth patterns of tropical species, the climate of the Indian subcontinent, and traditional Indian horticultural principles, specifically Vrikshayurveda.

Instead of applying design rules from temperate regions to tropical trees, this approach suggests that aesthetic principles should derive from the architecture of the species itself.

Drawing on my observations, botanical knowledge, and traditional Indian ecological thought, this treatise demonstrates that such an approach is both viable and necessary.

This book follows one main idea. Every aesthetic choice should come from the tree's biological identity, not from traditional style rules.

Image 2: Ficus benghalensis

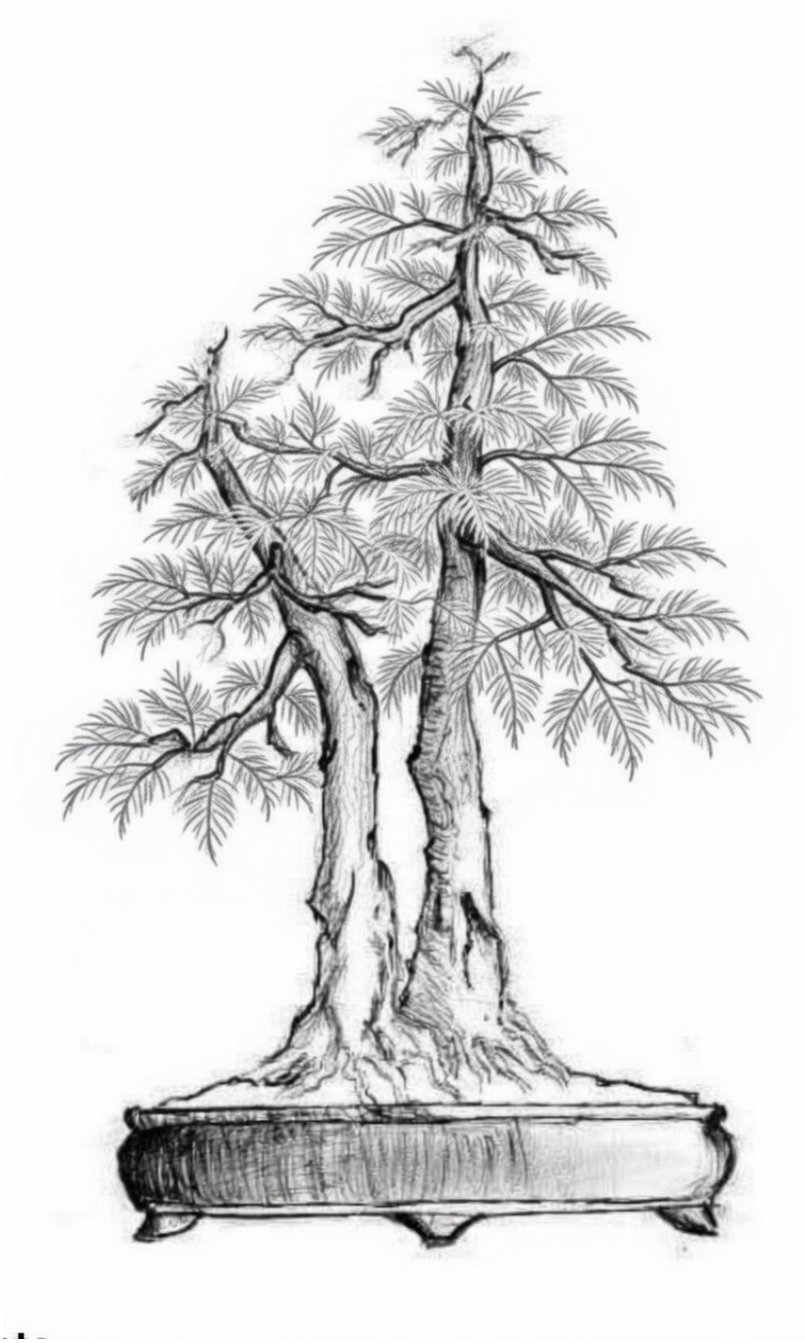


Image 3: Metasequoia Sokan style drawing by the author

Image *4: Windswept style drawing by the author*

Image 5: literati style drawing by the author

PART I: THE PERSONAL JOURNEY

CHAPTER 1: When the miniature comes to life

I didn't wake up one morning and say to myself, "I'm going to make bonsai trees."
It goes back a long time and brings together a lot of different interests. Scale and miniature form have been a source of fascination for me since childhood. This exploration started with scale modeling, which I've been doing for a while. But I rapidly found that something was missing without finding what it was.
Thinking about it, what bothered me was that the plastic models were too static; they lacked life. Once assembled, they became uninteresting to me.

In the 1980s, during a trip to Heidelberg in Germany, I went to visit the famous Paul Lesniewicz's Bonsai Zentrum. It was the beginning point. I was fascinated by the little pieces of nature in a pot. Intrigued by these living and aesthetic miniatures, I purchased a *Tilia cordata* young plant for a few Deutsche marks.
That specimen remains in my collection today, reminding me of the day when it all began, and one day, it will be a testament to the passion of my life.

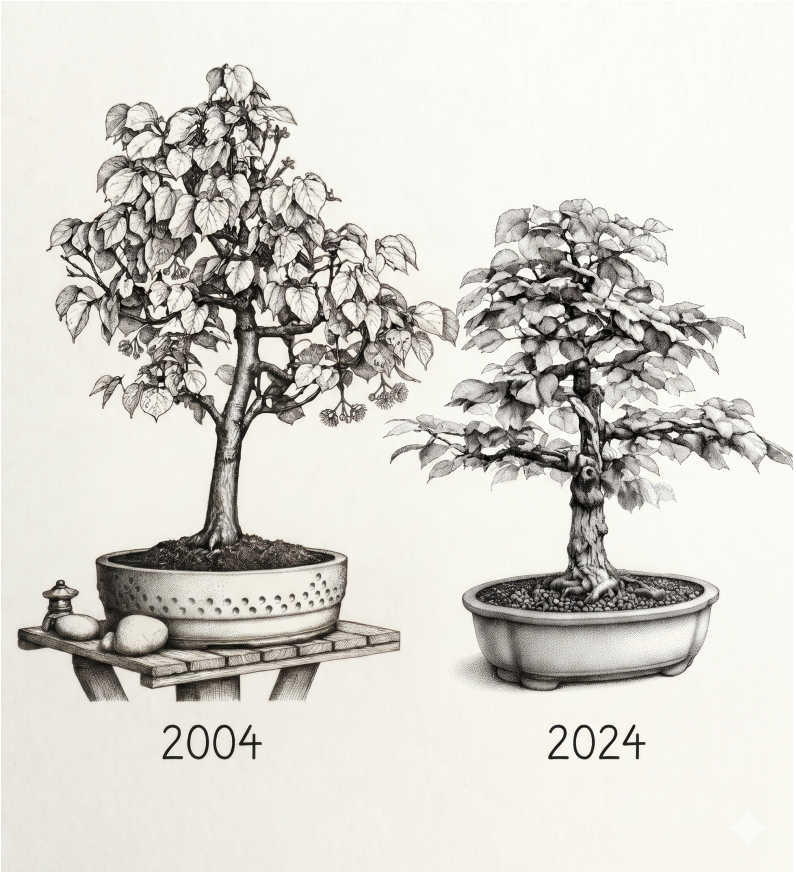


Image 6: Tilia cordata bonsai from the author

CHAPTER 2: The Shift

1) From passion to classroom: Translating a passion for botany into academic practice

When I was 30, I made a big decision: I abandoned my career aspirations as a store manager and went back to school. After five years of hard work, I earned diplomas in floriculture, horticulture, and nursery management. It was during this time that tropical flora became one of my interests.
This academic period opened my eyes to the complexity of plants, and I began to understand the techniques applied to bonsai. It wasn't just a matter of aesthetics.

2) From classroom to tropics: When personal life intersects with passion

My wife is of Indian origin. It might seem anecdotal, but because of that, we have traveled across India numerous times. I was able to admire the different landscapes and observe the trees in more detail. The structural characteristics and adaptive strategies developed by the tree species were totally different from what I used to see in Europe. It became the central focus of my botanical studies.

Image 7: At Vishnu's nursery

From left to right : Vinod Ponnuswamy (GP Bonsai & Adenium), Usman, Veer Choudhary (Bonsaipedia Studio), Vishnu Prasad (TreeArt Bonsai), Gilles Roszak, Manoj (Sree Bonsai Zone).

3) From tropics to bonsai : The outcome

During a trip, I visited the Sri Ganapathi Sachidananda Ashrama bonsai garden, where friends involved in the Indian bonsai community worked. I dreamed of staying there with them.My friend Vishnu Prasad also welcomed me to his nursery, where I was able to work on a few trees and observe young entrepreneurs at work, And above all, admire Veer Choudhary's practice. I had met Veer Choudhary two years earlier, during one of his trips to Italy; he had done me the honor of spending a few days at my home in France.During his stay, I had the incredible opportunity to work with him on some of my bonsai.I was also able to visit his studio in Rajamundry, a place filled with wonderful trees, each more beautiful than the last.
The circle was complete. My passion for miniatures, my passion for bonsai, and my passion for tropical botany all came together.

Image 8: Teaching at Sri Ganapathy Sachchidananda Ashram in Mysuru ©

Image 9: Ficus retusa at Sri Ganapathy Sachchidananda Ashram in Mysuru ©

Image 10: Vishnu Prasad and I at Sri Ganapathy Sachchidananda Ashram in Mysuru ©

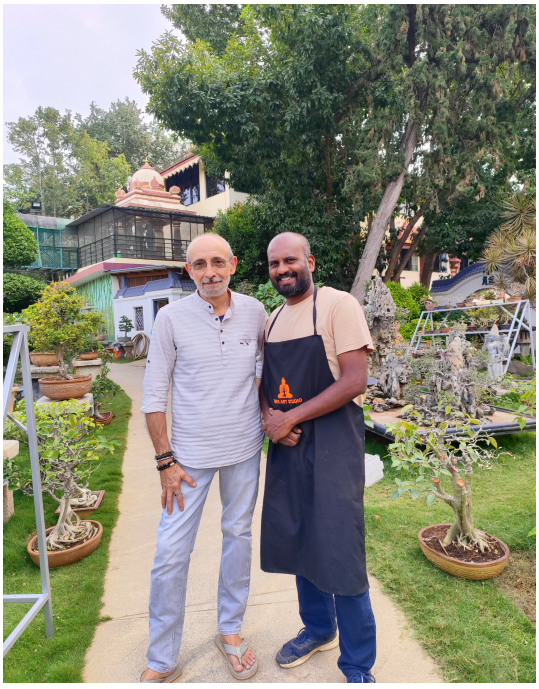


Image 11: Mathan and I at Sri Ganapathy Sachchidananda Ashram in Mysuru ©

Image 12: Master Veer at work in France ©

Image 13 : Master Veer ©

Image 14: BonsaiPedia Studio ©

Image 15: Marvellous bonsai garden at BonsaiPedia Studio ©

Image 16: Bonsai garden ©

Image 17: Nursery in Rajamundry Andhra Pradesh ©

Image 18: Ficus microcarpa Banyan style

PART II: THE TROPICAL DIVERGENCE & THE INDIAN AESTHETIC

CHAPTER 1: The Indian horizon

Comparing the bonsai practices between western and eastern countries, the difference is flagrant.
In much of Europe, notably in France, the strict Japanese discipline remains the dominant reference.
Innovations are minor and sometimes ephemeral. However, there are some movements that tend to transform the art of bonsai.(Walter Pall, Dan Robison, Kevin Willson, Laurent Darrieux et Hervé Dora...)
In India, Because the climatic, aesthetic, and philosophical components are different in India, this inevitably shows through in their bonsai.

A) The western counterpoint

1) The Burton Style: By Laurent Darrieux & Hervé Dora

Conceived and implemented in 2004 by two French artists, Laurent Darrieux and Hervé Dora.
Why "Burton Style"? It refers to the fantastical universe of filmmaker Tim Burton. The aim is to create fantastic trees by giving free rein to one's imagination. The only limitation is the tree's physiology.
The tree thus created must in no way resemble natural forms.
Laurent Darrieux and Hervé Dora published a book in 2006 named *"The Cosmic Bonsai,"* and Laurent Darrieux published *"Cosmic Bonsai 2" in 2020*.

Image 19: Burton style

Where are we today?
Unfortunately, this excellent progress is highly controversial. Above is a comment from the author, Mr. Darrieux.

"For those who follow along, and especially for those who read, you will have understood that the cosmic style will not be present at the 2026 Trophy, neither professionally nor in terms of the exhibition itself.
The orthodox fanatics of Japanese bonsai have prevailed over the only artistic attempt to break free from an increasingly uniform, standardized, and repetitive horticultural trend. This is why I wish all these people the best of luck in fully enjoying this edition, in which no deviant work will offend the chaste and untainted eyes of seasoned purists.
Let's hope that in the future, this "artistic" stance we are taking will make them ease up on the obstacles they systematically place in our way at every exhibition." (**Laurent Darrieux**, 02/2026, Facebook)

2) The naturalistic style: By Walter Pall

Another personality, Walter Pall, profoundly shaped European Bonsai. His approach led him to create the naturalistic style.
John Naka once said: "*A bonsai must look like a tree, not like a bonsai."*
That is exactly what Walter Pall put into practice.
A very interesting point regarding this style is that we don't have to choose the front of the tree. It can be viewed from all angles.
Another point :real trees do not usually have large negative spaces between all of their branches, It must be the same in this style.

Image 20: naturalistic style by Walter Pall

3) The fairy tale style (F.T.S.): By Walter Pall

Here is something that holds one's attention. A style that disrespects the naturalistic style.
Everyone can picture the trees seen in children's fairy tales: enormous, twisting, covered in moss, and seemingly ancient. Their improbable shapes are imposing.

One of the great advantages of this style is precisely that it allows excellent results to be achieved with materials that would otherwise have no value.
Despite the fact that M. Walter Pall's naturalistic and fairy tale styles are considered a break from tradition in the West, in China, long before the Japanese codifications, the masters of penjing had already explored these paths. (see Baran, n.d.; Zhao, 2012)

Image 21: Fairy tale style

B) The tropical divergence: The rebirth of a style

Indian trees have an entirely different growth pattern dictated by radical climatic variations, as we saw previously, and biological necessity, sympodial versus monopodial, which we will develop later.
Hence, the traditional Japanese method is very difficult to apply.
It is time to consider tropical characteristics not as a limitation but as a unique feature and to take advantage of them
These biological and climatic differences not only allow, but also lay the foundations for the emergence of a distinct style.
In fact, this concept is not as new as it seems. Dr. Leila Dhanda said in her book "Bonsai Culture" in 1984, "Temperate technique did not suit the Indian climate." She was the first to bring up the subject.
Then, ten years later, in 1993, Nikunj and Jyoti Parekh, with their work "Wonderworld of Tropical Bonsai," marked the turning point toward an original Indian style.
Despite this growing awareness, bonsai competitions in India today continue to base their judging on Japanese criteria, which is increasingly controversial because these regulations are written and designed for temperate-climate trees.

Table 1: Standard scale of the Indo-Japanese Association of Mumbai

Standard scale of the Indo-Japanese Association of Mumbai, which aligns with WBFF (World Bonsai Friendship Federation) standards.		
Category	**Criteria & Key Requirements**	**Point Allocation**
Trunk & Base (Nebari & Taper)	• Nebari: Visible root flare spreading in a radial/star pattern at the soil surface. • Taper: Continuous and harmonious tapering from base to apex, with no reverse taper.	30 to 40 points
Branch Structure (Ramification)	• Absence of "faulty branches": Elimination of structural defects according to Japanese canons (parallel, crossing, or eye-poking branches). • Branch placement: First major branch ideally located at the lower third of the tree's total height.	30 points
Overall Presentation (Harmony & Container)	• Pot selection: Appropriateness of the container (color, shape, and proportions relative to the tree). • Grooming and display: Cleanliness of the substrate and neatly manicured moss.	20 points
Artistic Impression (Suggested Age)	• Mochikomi: The overall illusion of maturity, character, and evidence of long-term cultivation in the pot.	10 points

C) Defining the Indian Bonsai Aesthetic

The question is not whether tropical species can be cultivated within a temperate climate aesthetic. The real question is whether their architecture, ecology, and cultural symbolism invite the emergence of additional aesthetic frameworks. It is essential to understand this.
This description of the "Indian-style" Indian bonsai aesthetic is the result of several years of observation travel in India through a number of its diverse ecological areas and visits to many established bonsai nurseries, exhibitions, and bonsai gardens, including sites such as the Sri Ganapathy Sachchidananda Ashrama bonsai garden, TreeArt Bonsai nursery, and Bonsaipedia studio. It must be noted that this is certainly a radical departure from classical ideas and principles.
In this approach, the tree is defined by its biology.

1. The tree

The Indian style of training is best recognized by its wide, spreading crown, which features multiple tiers of branch development along its top, and an overall shape that's open, spherical, and round or, in a pagoda, rounded and somewhat layered at the top. It has its inspiration in those tremendously spreading tropical trees that grow to impressive sizes both outward as well as upright. In this style, you do not see discrete, sharply defined foliage pads; the branches naturally intertwine to form one large, unbroken dome.

The style calls for pronounced lower horizontal branches that sometimes stretch far beyond the pot rim and are frequently assisted in holding the structure by trunk-like root buttresses (depending on the species).

Unlike traditional Japanese design schools, which favor a single viewing angle for the bonsai, treating it somewhat like a portrait, the Indian approach views the tree as a three-dimensional sculpture. Following the precedent of nature's multidimensional form, such as what is seen in enormous trees such as the banyan, peepal, tamarind, and bakul…which has given form to those spreading crowns of the lowland forest canopy that extend outward from the trunk line spherically in all directions in an attempt to gather light…this requires a dramatic trunk line and equally dramatic and widespread nebari of the same radius. Such broad branching can have a profound depth, sense of balance, and fascination to a bonsai regardless of the perspective from which it may be observed.

A word on deadwood features (Jin, Shari, and Uro), which are rarely encountered in the Indian style. Many of these techniques are not suited to every type of tropical species. Tropical species with deciduous foliage and soft wood prone to rot simply cannot withstand long-term deadwood exposure. Only species with very dense and/or resinous wood are suitable for these techniques: *Casuarina equisetifolia*. (whose heartwood has been used to produce ironwood), Premna, and sometimes slower-growing species like *Tamarindus indica*. These are ideal candidates for demanding Jin and Shari treatments. *Streblus asper* and *Tamarindus indica* are also suitable for creating aesthetic cavities (Uro) that evoke a venerable tree.

Table 2: Visual principles of the Indian Bonsai Aesthetic

Feature	Description & Aesthetic Philosophy
Crown & Canopy	Wide, spreading, open, and spherical. Features multiple tiers along a rounded or pagoda-like top. It avoids sharply-defined foliage pads, opting instead for branches that naturally intertwine into one large, unbroken dome.
Branching Structure	Pronounced lower horizontal branches that can stretch far beyond the pot rim. Branching extends spherically in all directions with profound depth, balancing the canopy.
Support Elements	Frequent use of trunk-like root buttresses (depending on the species) to assist in holding the massive, horizontal branch structure.
Viewing Philosophy	Treated as a three-dimensional sculpture meant to be admired from any perspective, breaking away from the single-viewing-angle "portrait" approach of traditional Japanese schools.
Trunk & Base	Requires a dramatic trunk line paired with an equally dramatic, widespread nebari (root flare) that mirrors the wide radius of the canopy.

Table 3: Suitability of Deadwood Techniques (Jin, Shari, Uro)

Species	Wood Characteristics	Suitable Techniques
Casuarina equisetifolia	Very dense, resinous heartwood (historically used as ironwood).	Highly suitable for demanding Jin (stripped branches) and Shari (stripped trunk bark).
Premna	Dense and/or resinous wood.	Highly suitable for demanding Jin and Shari treatments.
Tamarindus indica	Slower-growing, dense wood.	Suitable for Jin, Shari, and creating aesthetic Uro (hollows/cavities) that evoke a venerable tree.
Streblus asper	Dense wood suited to aging characteristics.	Ideal for creating aesthetic Uro (hollows/cavities).
General Softwood / Deciduous Tropicals	Soft wood highly prone to rot under humid conditions.	Unsuitable; cannot withstand long-term deadwood exposure.

2. The pot

To round out the presentation of Indian bonsai aesthetic, it is worth mentioning their containers (a topic we will discuss in detail in PART III, CHAPTER 3). These depart from the Japanese ceramic tradition to adopt shapes that meet the biological and aesthetic needs of trees thriving in a subtropical climate. While the Temperate aesthetic favors a shallow pot, whether glazed or unglazed, and understated in design, suited to the slow growth of many temperate-climate species, the typical Indian pot is deeper. It must support the rapid, growth of trees with dense root systems, such as Premna and Ficus, while ensuring a constant water supply. The materials include terracotta and glazed ceramics, featuring either earthy tones (ochre, warm copper) or vibrant colors (such as a deep, warm turquoise). Indian enthusiasts appreciate the organic appeal of soft, rounded, or oval shapes or those evoking the lotus which contrast beautifully with the trees silhouettes.

CHAPTER 2: Inventory of species used for bonsai

Clearly, aside from the shape of the tree and its container, the species themselves differ.

Here is a non-exhaustive list of trees cultivated as bonsai that I have observed. (Mukherjee, 1983 ; Singh & Sharma, 2023)

1. The Ficus Genus (The Pillars of Indian Style)

Important and sacred by many, Ficus represents itself as the true king of tropical bonsai in India due to its ability to create aerial roots and regenerate wounded parts at an incredibly fast pace. *Ficus benghalensis* (Banyan / Indian Banyan / Bargad): India's national tree, it fits the style omnidirectionally with its vertical air roots and gigantic horizontal branches. *Ficus religiosa* (Peepal / Sacred Fig): This is the sacred fig tree upon which Buddha meditated, becoming enlightened; appreciated for the fluting of the trunk, powerful nebari (surface roots) and distinctive heart-shaped leaves (Singh & Sharma, 2023).

Ficus microcarpa / retusa (Indian Laurel): It's a very aggressive species and can be pruned more heavily and often than the others; well suited to massive and dense canopies.

Ficus racemosa (Cluster Fig / Gular): Remarkable for its smooth trunk, and incredible for its ability to fruit from its branches and main trunk, a phenomenon known as cauliflory.

Ficus benjamina (Weeping Fig / Pukar): this is an Indian plant for creating a silhouette effect with fine and droopy branches and it originates in humid, lowland environments.

Ficus rumphii (Rumph's Fig / Pakar / Gaias): Leaves are similarly heart-shaped and tipped but not as handsome; confused for Peepal. India values its pale,smooth grey bark and striking glossypale gold and copper tipped new growth.

Ficus infectoria / Ficus virens (White Fig / Pilkhan / Pakur): Top Indian Species Known for incredible season change. This tree is highly popular because of the wonderful spectacular flush in early spring where the entire crown erupts into spectacular coppery red and transluent pink foliage before turning to shiny deep green foliage. This tree grows a giant trunk, aggressive surface roots and develops ramification very fast

Ficus amplissima (Bat Fig / Pipal / Pipri): A magnificent large tree native to central and southern India. It is highly valued by bonsai artists for its smooth, greenish-grey bark, its dense, spreading canopy of leathery oblong leaves, and its exceptional tolerance to aggressive root-pruning and container culture.

Ficus mollis (Soft Fig / Velvet Leaf Fig / Russet Fig): Highly valued in the Indian style for its distinctively soft, downy, or velvety leaves and yellowish-tomentose twigs. It brings a unique, matte texture and a rugged, pale bark to collections, adapting beautifully to dry-styling techniques.

Ficus religiosa (Peepal / Sacred Fig): The tree beneath which Lord Buddha attained enlightenment. Much valued for its striking grooved trunk (rind/bark), prominent above ground surface roots (nebari) and the quintessential beautiful heart-shaped leaves with gracefully tapering, tail-like points that sway gently in even the slightest air movement.

2. Dominant Species (Premna, Murraya, Bougainvillea, and Other Essentials)

These species form the heart of contemporary Indian collections, appreciated for their wood quality, compactness, or incredible vigor.(Parrotta, 2001; Pullaiah et al., 2002; Rajendran & Daniel, 2002; Roy, 2010)

Premna (Premna serratifolia / microphylla): Definitely one of the best performers for tropical climes. Indian Artists use Premna a lot for its gigantic trunks that they will hollow or dramatically carve up in all sorts of weird ways out of driftwood and also for its astonishing degree of reduction of the leaves which is the reason why extremely dense canopies and foliage can be produced.

Murraya paniculata (Kamini / Orange Jasmine): Highly popular for its satin-white bark, glossy dark green foliage, and repeated flushes of intensely fragrant white flowers.

Bougainvillea: Omnipresent across India. It is cultivated as bonsai using massive, woody trunks collected from urban landscapes (urban *yamadori*). Artists master water stress techniques to trigger 360 degree explosions of vibrant, textured colors (bracts).

Mangifera indica (Mango Tree): Its leaves are naturally big though in India, the mango tree is practiced in large size bonsai (XL Size). This form of tree representing country old tree which generally stand as big old tree in the middle of village with wide spreading and strong trunk, which demands heavy pruning for defoliation.

3. Flowering and fruiting species

Indian culture is deeply intertwined with useful and aromatic trees. Naturally, these essences are staples on exhibition benches:

Tamarindus indica (Tamarind / Imli): One of the finest expressions of the Indian bonsai style. Its deeply fissured black bark and compound foliage which folds up at night, give it an unparalleled elegance and a profound sense of age.(Parrotta, 2001).

Mimusops elengi (Bakul / Bullet Wood): A native tree with dense, evergreen foliage. It produces small, star-shaped, extremely fragrant flowers that retain their scent even after drying. It is perfect for rounded, dome-shaped styles.(Brandis, 1906).

Wrightia religiosa (Water Jasmine): Prized for the flexibility of its branches (making it easy to wire or guy-wire) and its hanging white, bell-shaped flowers that exhale a delicate perfume.(Corner, 1988).

Malpighia coccigera (Barbados Cherry / Singapore Holly): Though exotic, it thrives in the Indian climate. Its miniature, spiny leaves, pink flowers, and subsequent red berries make it a highly rewarding subject for small-sized bonsai.(Bärtels, 2002).

4. Dry Zone Trees and Rugged Barks

Originating from the dry forests or semi-arid regions of India, these trees bring a texture of survival and powerful graphic lines to the art.

Streblus asper (Shakhotaka / Siamese Rough Bush): A historical tree in Indian bonsai. Its leaves are as rough as sandpaper, and its natural "zig-zag" angular growth makes it the perfect candidate for the *clip-and-grow* technique (directional pruning without wire).(Brandis, 1906)

Azadirachta indica (Neem / Margosa): Known as India's "pharmacy tree." When styled as a bonsai, it develops very dark bark and delicate, serrated foliage that creates a light, almost airy silhouette, contrasting beautifully with the power of its trunk.(Jafari et al., 2013).

Acacia nilotica / Senegalia catechu (Babul / Khair): Representing the arid landscapes of Rajasthan or Gujarat, these thorny trees offer tiny leaflets and matte, cracked bark, ideal for evoking the harshness of dry climates. (Grygier et al., 2023).

Adansonia digitata (African Baobab): Though originally native to Africa, massive centuries-old specimens thrive across India (often brought by historical trade routes). In bonsai form, its disproportionately thick, smooth, bulbous trunk and minimalist winter silhouette make it an exceptional candidate for creating a striking, surreal sense of scale and ancient survival.(Bell et al., 2015)

5. "Coniferous" Adaptations for Warm Climates

Since true pines and junipers struggle in the hot Indian plains, one species has emerged to recreate those classic lines:

Casuarina equisetifolia (Whistling Pine / Horsetail Tree / Filao): Although it is a broad leaf deciduous tree, its extremely fine branchlets are surprisingly similar to those of the pines. The ultra-hard wood (Ironwood) is very suitable for making beautiful, long lasting natural deadwood (jin),(Pinyopusarerk & Williams, 2004) while at the same time building up a more tabular or pagoda style crown found in tropical styles.(Navaneetha Krishnan, 2025).

The exuberance of mass and the poetry of shadow. This giant Ficus benjamina embodies the protective canopy and the aesthetic of abundance (Prana) characteristic of the South Asian landscape, a major source of inspiration for a majestic style of bonsai.

(Wouter Hagens, Public domain, via Wikimedia Commons)

The fluid architecture of the *Ficus* vascular system. Driven by an extraordinarily active cambium, the roots and trunks of tropical figs seamlessly graft onto themselves upon contact, transforming a single organism into a complex, self-supporting pillar colony.

(Wouter Hagens, Public domain, via Wikimedia Commons)

PART III: BIOLOGICAL FOUNDATIONS OF A NEW TREE DESIGN.

"The structure of every organic being is related... to the conditions of life."
(Darwin, 1859, p. 142)

CHAPTER 1: Blueprint and/or mind of the tropical trees: plasticity and survival.

For a long time, we considered plants to be passive, unconscious, and insensitive. Advances in plant biology suggest that this is not the case.
As stated in an article in the journal Interface Focus (***"The foundations of plant intelligence"*** *by Anthony Trewavas, published in the journal Interface Focus (The Royal Society*)).

-Plant passivity is a myth.
-Plants are constantly evaluating their environment.
-Plants have memory, make choices and make decisions.-Plants know how to correct their mistakes.
-Plants have a language and communicate.

Trees do not have a central nervous system like us, but they have a truly adaptive intelligence. Their communications and "awareness" occur through complex biochemical signals and association between roots and fungi.(Primarily through auxins, cytokinins, and other phytohormones).

Maintaining a bonsai requires communication. To style a tree without errors and without causing damage, we have to know exactly how it will react.You cannot impose your will; it simply does not work. Knowing and understanding these reactions is fundamental and not easy. We have to take into account not only the blueprint but also "the mind."

Two opposing principles of development govern botany and, therefore, our bonsai trees.

Monopodial growth.(excurrent)
Sympodial growth.(deliquescent/decurrent.)*

**In older botanical treatises, the term decurrent was often used to describe the phenotype. In modern botany, this term refers solely to the type of leaf insertion.*

1) Monopodial (excurrent)

First of all, let me explain the difference between monopodial and excurrent. Monopodial describes the internal mechanism and, excurrent, describes the phenotype, the appearance, the resulting silhouette of the monopodial growth model.

Monopodial growth patterns result in trees with strict apical dominance, leading to a conical silhouette.Classical Japanese bonsai frequently emphasize species displaying strong apical dominance. A solid central trunk with secondary lateral branches.
In India the Monopodial trees can be found in the temperate and alpine zones of the Himalayas for example: -
Cedrus deodara,
- Pinus wallichiana,
- Pinus roxburghii,
- Abies spectabilis,
- Picea smithiana.
However, we cannot say that every monopodial tree in India is coniferous. There are some angiosperms such as Polyalthia longifolia, which is famous for its very typical column form, and all the native palms.

2) Sympodial.(decurrent*/deliquescent)

I won’t repeat the explanation that I gave in the preceding paragraph. This also applies here.

The specificity of the sympodial growth pattern is that the terminal bud ceases to grow. It can be because it terminates in a flower, naturally shed (botanical strategy programmed). or it aborted due to environmental signals like water limitation, extreme temperatures, etc. They lose apical dominance.
The lateral buds then take over and develop broad lateral branches, which will eventually form a dome, a very wide-spreading canopy.
Tamarindus indica, *Ficus benghalensis*, and *Azadirachta indica* are striking examples. In the case of the Ficus benghalensis, these massive spreading branches induce the growth of aerial roots, forming supporting pillars.
These two different frameworks, monopodial and sympodial, are substantially amplified by climatic conditions.
In European climates like in France, the trees are subject to an almost total cessation of their vegetative growth.
As a result, trees try to protect the terminal bud by directing the maximum of their energy reserves to it, which allows them to resume their growth immediately with the arrival of spring.
Their vertical architecture also helps to limit snow accumulation, thus preventing structural damage. Finally, France's high-latitude geographical location allows an optimal use of light with a simple, tall trunk.

Quite the opposite, in the Indian tropical zone, trees do not need to protect themselves from the cold and can easily distribute their reserves throughout the canopy. This promotes their growth in all directions. The sun's high position in the sky at these latitudes is maximized by this lateral expansion.
The projected shade will also help to eliminate vegetation and competition with other plants.

What are the implications for the Indian aesthetics of bonsai?
Instead of having a single Japanese style apex, it would be better to aim for a broad, dome-shaped crown and wide-spreading, horizontal branches, evoking a tropical canopy.

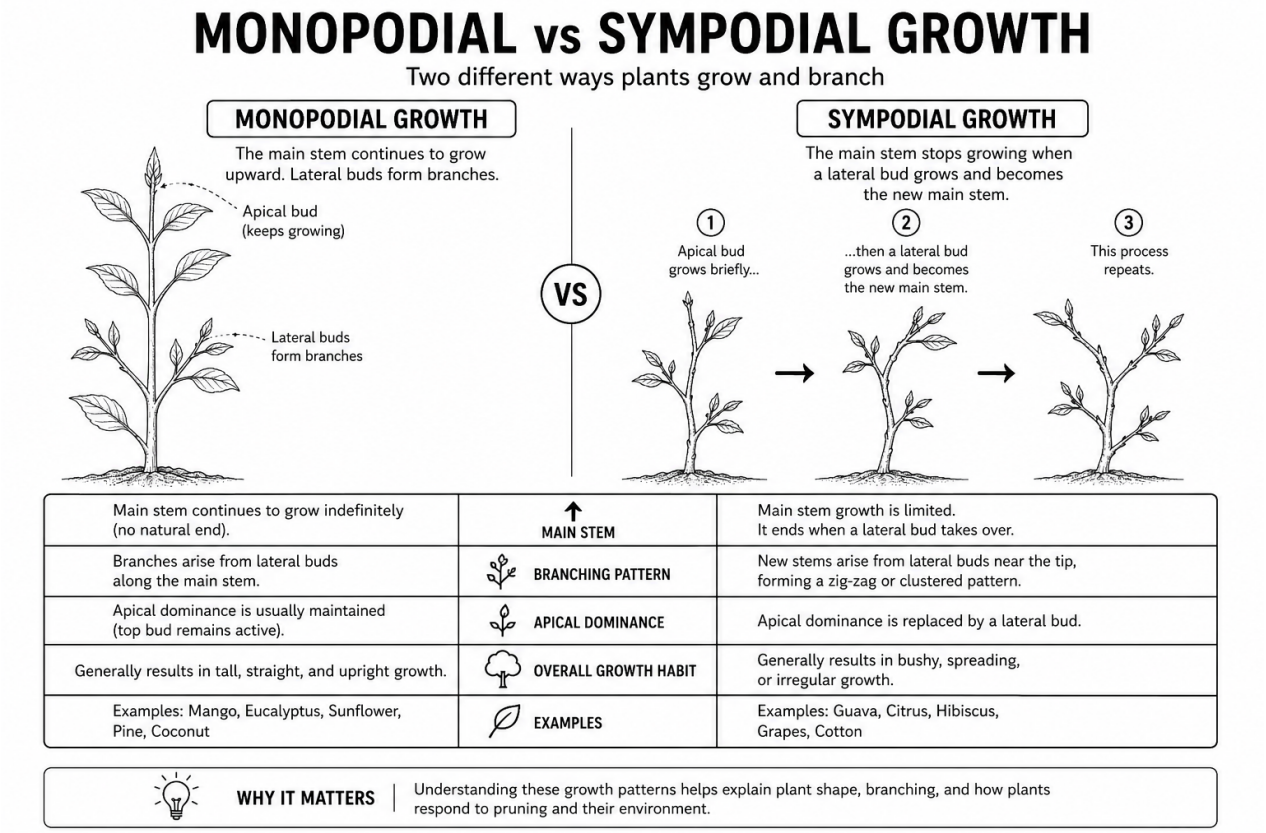


Image 22: Monopodial/sympodial

CHAPTER 2: Irrigation, soil architecture and environmental management.

Watering bonsai trees is not an easy task. It is often one of the main causes of tree death for beginners.
Yet, in temperate climates, the typical Japanese substrate, with a little experience, poses no problem.
The watering schedule follows a predictable and rather smooth seasonal curve and, in winter, watering becomes minimal. Akadama, pozzolane and pumice stone, traditional aggregates, are very well suited to our climate. They are perfectly balanced for air circulation and water retention.

Sunlight is one of the key environmental factors we monitor in Europe. We expose the bonsai to it as much as possible (except during heatwaves, when some shade may be necessary) to reduce the size of the leaves.
This is not the case in tropical climates. The enormous difference between the months when the heat easily reaches 40°C, the pre-monsoon period when the air humidity is very high, and the months of heavy monsoon rains makes the task of watering much more delicate and much less systematic
.
A growing medium made entirely of akadama would quickly become a "suffocating mass for the roots" under the influence of monsoon rains, depriving the roots of oxygen and causing them to suffocate. During periods of intense heat, the surface layer could give the impression that watering is necessary even though the core of the soil is still moist. This leads to excessive watering.

Environmental constraints are far more numerous in tropical climates.
In very hot and sunny weather, shade is essential. Shade sails offering 50% to 75% coverage are often used.
Before the monsoon, when it is very hot and dry, it is necessary to restore ambient humidity by misting the foliage.
With the arrival of the monsoon, additional precautions are necessary. Pots should be tilted to facilitate drainage, trees should be partially protected from continuous downpours, and, above all, preventative treatments against fungal attacks should be applied.

In summary, it can be said that European or Japanese practices regarding watering, preparation of growing media and management of environmental constraints generally require adaptation to the climate of the tropical regions of India.

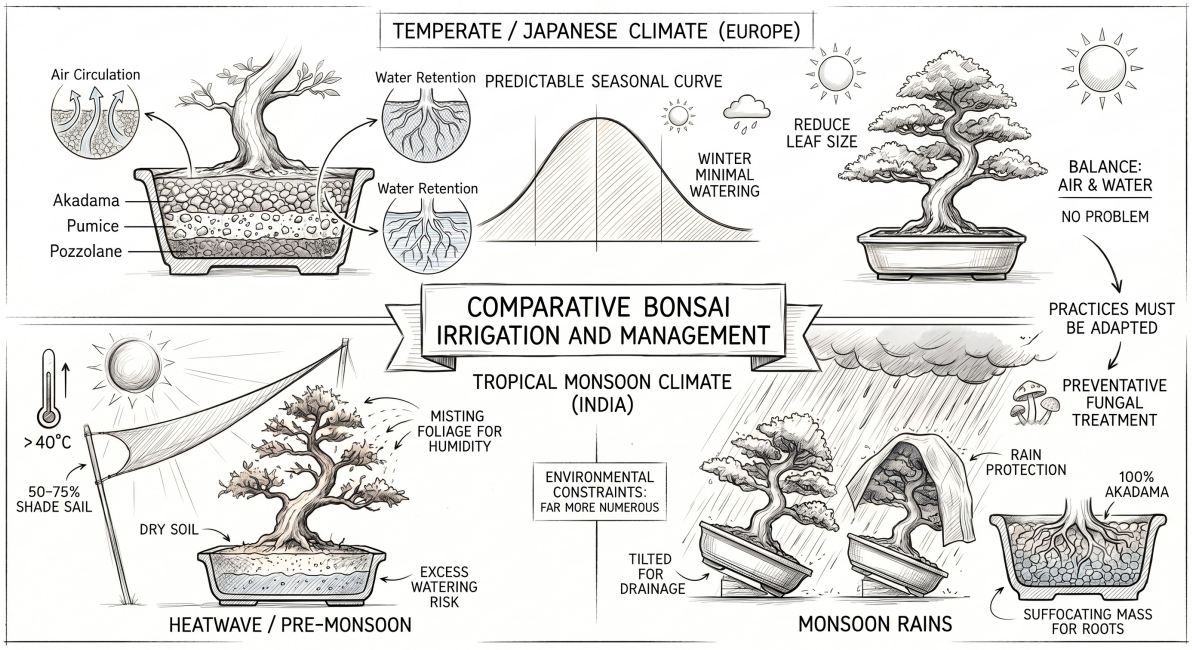
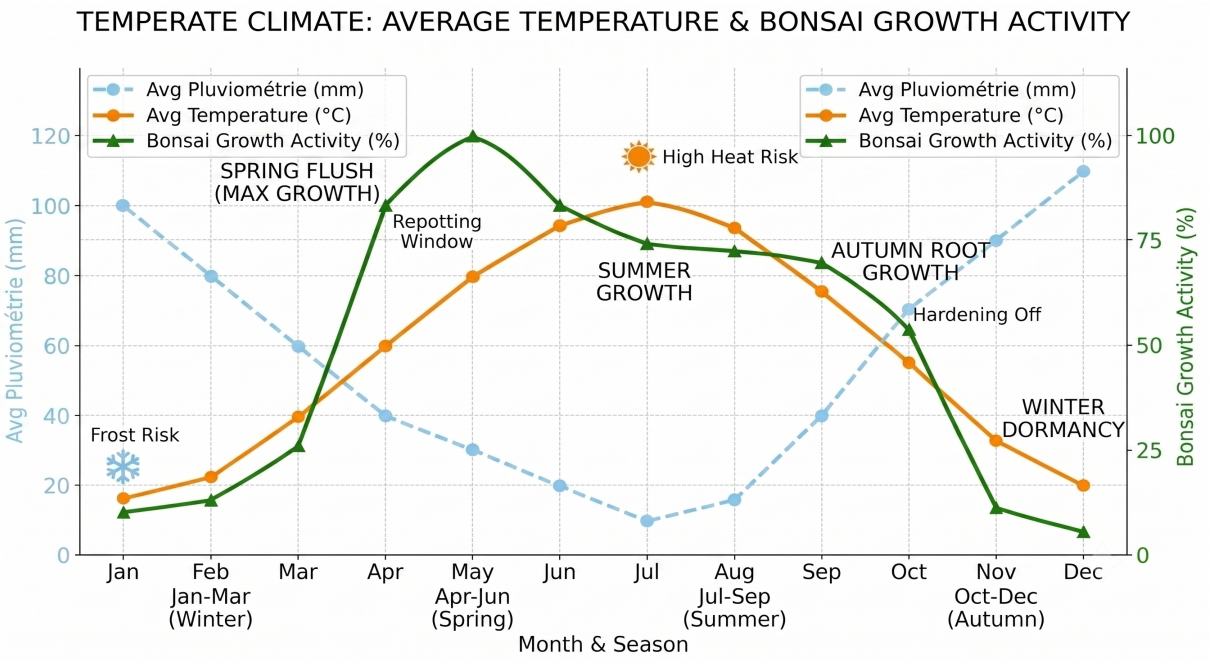
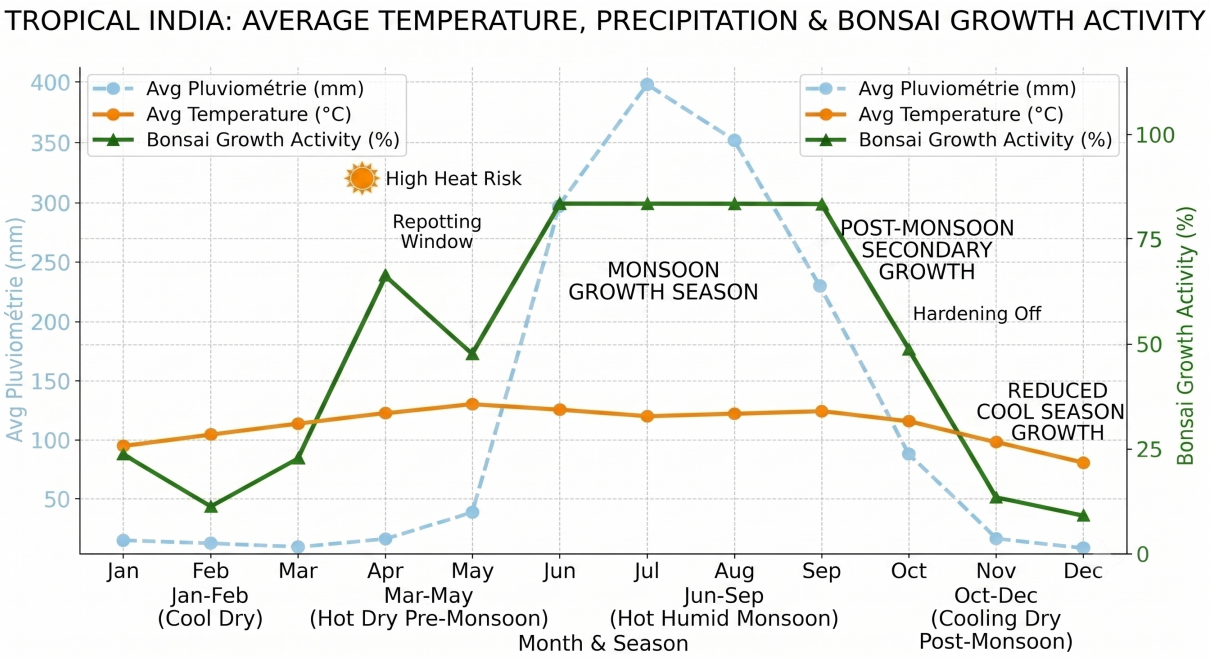


Image *23: Bonsai irrigation*



graphique 1: Temperate climate



graphique 2: India tropical climate

Comparison of Substrate Formulations

Table 4: Comparison of Substrate Formulations

Component	Japanese/European (Coniferous)	Japanese/European (Deciduous)	Tropical/Indian Style (with Coco Peat & Charcoal)
Akadama	33%	50%	0%
Pumice	33%	25%	30%
Lava Rock	33%	25%	30%
Coco Peat	0%	0%	20%
Charcoal	0%	0%	10%
Other Organics	0%	0%	10%

Provenance and Characteristics of Substrate Components

Table 5: Provenance and Characteristics of Substrate Components

Component	Primary Provenance	Material Type	Key Characteristic
Akadama	Japan (Volcanic clay)	Fired clay	High porosity; softens over time.
Pumice	Volcanic deposits (Global)	Igneous rock	Highly porous; lightweight; holds water/air.
Lava Rock	Volcanic deposits (Global)	Igneous rock	Porous; high surface area; structural stability.
Coco Peat	Tropical regions (India/SE Asia)	Organic fiber	Excellent water retention; acidic potential.
Charcoal	Hardwood (Traditional burning)	Carbonized organic	PH buffer; microbial habitat; adsorbent.
Other Organics	Local forests/gardens	Bark/Compost	Gradual breakdown; nutrient supply.

Table of aggregates

Primary bonsai aggregates for European climate

Table 6: european/japanes climate aggregates

characteristic	Behavior in Europ (Temperate climate)	Behavior India (Tropical climate/Monsoon)
Akadama	Ideally, it absorbs water and releases it slowly. Its gradual degradation over a few years stimulates the root hair.	Under the effect of intense heat, multiple waterings (sometimes 3 times a day) and acidic monsoon rains, the baked clay disintegrates into a compact mud in a few months, suffocating tropical species.
pumice	Excellent for aerating the mixture and storing residual moisture without excess.	Too light and passively porous. Faced with rapid tropical evaporation, its retention capacity is insufficient in summer, while it can saturate the air space during the monsoon.
Lava rock/crush bricks	Stability and microporosity.	Provides structural weight and holds minor moisture without breaking down.

Primary bonsai aggregates for tropical India

Table 7: Indian aggregates

Aggregate	Property	Role in mix
Volcanic pumice	Excellent drainage and air porosity.	Prevents compaction during monsoon.
Lava rock/crush bricks	Stability and microporosity.	Provides structural weight and holds minor moisture without breaking down.
Expanded clay (brick bats)	Water retention without waterlogging.	Holds moisture during the heatwaves, but sheds excess water during heavy rains.
River sand (coarse/quartz grit)	Maximum drainage.	Increase weight and ensure water passes through instantly. Never turn to mud.
Pine bark/biochar/charcoal	Organic component and microbial activity	Adds slight acidity and holds nutrients. .Biochar prevents souring during stagnant humidity.
Coco peats (coir dust)	Very good water retention	Essential for surviving heatwaves. Small percentages
Coco chips	Aeration and moisture retention.	Larger chunks that hold water but create large air pockets, allowing roots to breathe even during heavy rains.

CHAPTER 3: The container.

Finally, one might think that by mastering the biology of our tree and knowing what support to give it for its growth, the circle was complete.
The Bonsai is a trilogy. The tree, the living subject. The substrate, which is the support and the nutrient reserve and the pot, the frame, which is not only aesthetic but also functional. These three elements work in synergy. Human hands are the fourth element who must implement this synergy. If one element is missing or is unsuitable, the synergy collapses.

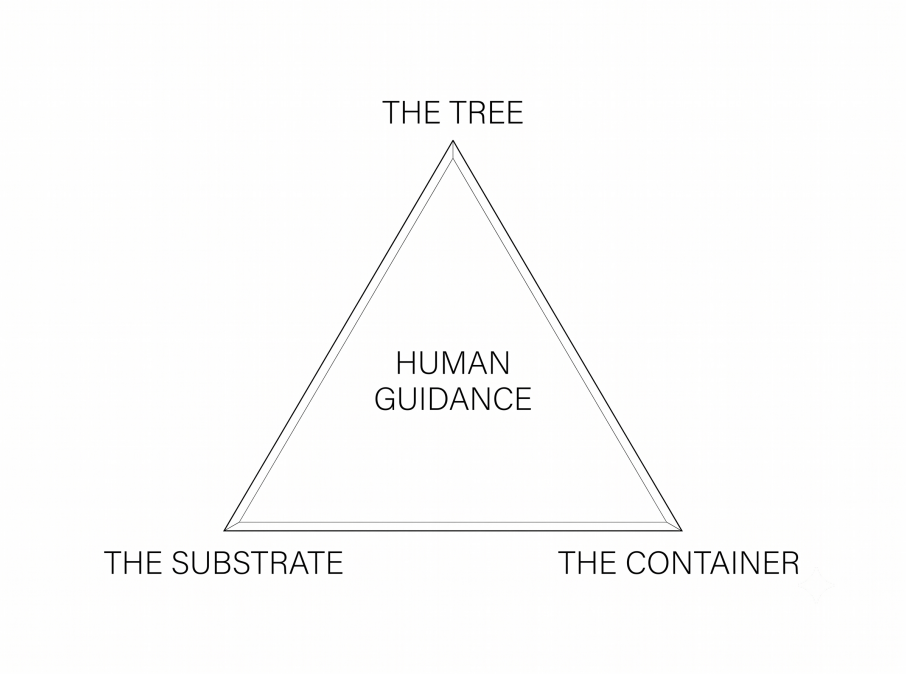


Image 24: The trilogy

Traditional Japanese bonsai pots, such as those from the Tokoname region, must withstand very low winter temperatures without cracking due to frost. They are therefore fired at very high temperatures (vitrification), which reduces their porosity. They are microporous. Many European ceramicists specializing in bonsai now use the same technique. This technique is perfectly suited to both European and Japanese climates.

But is this really necessary in a tropical climate? Or rather, isn't it a mistake to use this type of pottery, designed for temperate climates, in India?

An Indian bonsai potter said:
In my personal opinion, a bonsai pot is not merely a frame for the tree; it is part of its growing environment. In tropical climates, traditional Indian terracotta / stoneware pots may provide functional benefits that are often overlooked in discussions focused solely on aesthetics. (Asit Banerjee, Kaavya ceramics, Lucknow)

How can we solve this equation?
For me, a more suitable solution in many tropical contexts is to look at what exists and works in Indian horticulture for a long time, the time-tested materials.
The traditional Indian terracotta pottery seems to be a good choice, and I will explain why.
The manufacturing process uses lower temperatures than those used for vitrified ceramics. This helps preserve the interconnectedness of the macroporosity within the clay body (Simoneau, 2021). This creates a capillary effect from the inside to the outside of the container (Karimi, 2021).
During the transfer of water from the inside of the pot through it to the outside, the water transforms into vapor. This transformation requires energy; this energy is directly drawn from the mass of the substrate, which cools it (Karimi, n.d.; Luniachek et al., 2017).
Depending on the air humidity, wind strength, and the geometry of the pot, this phenomenon can lower the temperature inside the pot by 3 to 10°C compared to the ambient air (Basediya et al., 2011; Luniachek et al., 2017).
But this is not a risk-free solution. While traditional pottery offers superior thermal buffering compared to standard bonsai pots, protecting the root ball from 'root cooking,' the increased exchange of oxygen and water with the environment requires you to monitor the moisture level of the root ball more regularly.

Pots specificity

Table 8: Pots specificity

Feature	Indian Terracotta	Japanese Bonsai Ceramics
Material/ Firing	Earthenware; fired at lower temperatures ($<1000^\circ\text{C}$).	Stoneware; high-fired (1100°C–1300°C).
Porosity	Highly porous; excellent airflow to roots.	Controlled porosity; maintains oxygen exchange.
Durability	Fragile; susceptible to chipping and frost damage.	High; frost-resistant and long-lasting.
Water Dynamics	Dries out rapidly; ideal for high-humidity climates.	Even moisture retention; superior for controlled growth.
Aesthetics	Earthy, rustic, and natural textures.	Refined, muted tones; designed to "frame" the tree.
Cost	Generally very affordable/accessible.	Investment piece; higher cost due to artistry/craft.
Function	Practical for development or field growth.	Optimized for long-term health and display.

Image 25: Indian terracotta potery 1

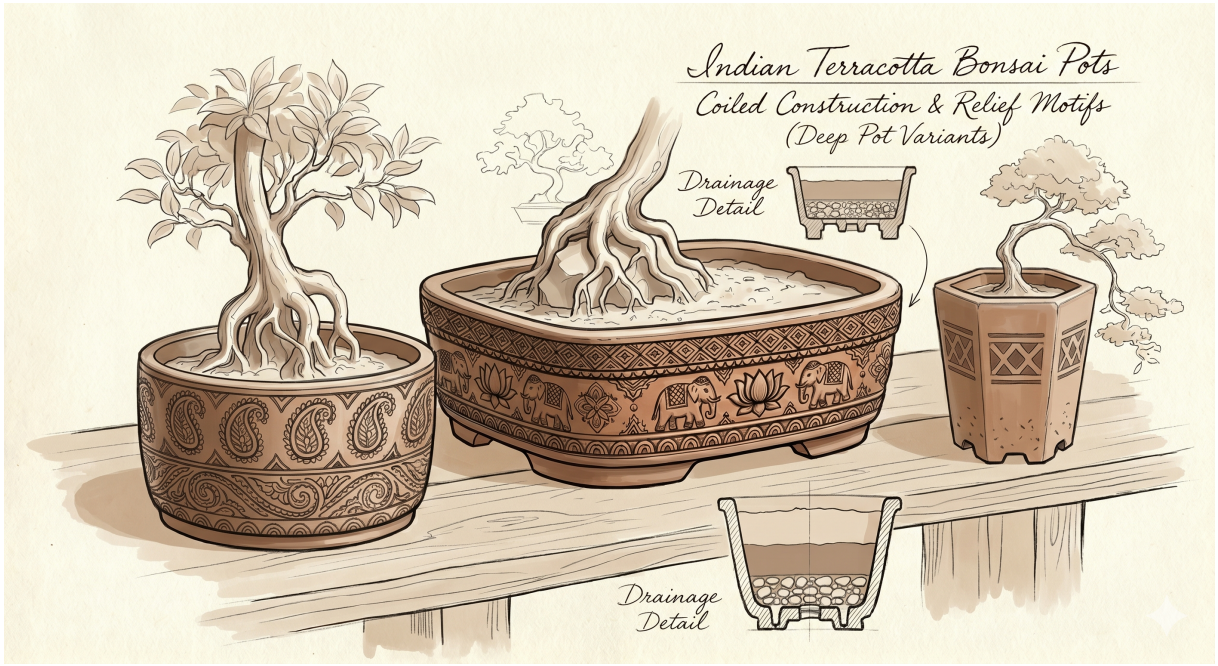


Image 26: Indian terracotta potery 2

Image 27: Indian style Bonsai pot

Image 28: indian style pot2

CHAPTER 4: Learning from Native Trees

Introduction

In previous chapters, we demonstrated that factors such as climate, ecology, and tree structure play a decisive role in bonsai creation. Inspired by the architectural approach developed by Francis Hallé, Roelof A.A. Oldeman, and P.B. Tomlinson (1978), the ecological case studies that follow concentrate on the trees rather than on bonsai practice. Each tree species possesses unique characteristics regarding its growth, form, and survival needs. By understanding these biological specificities, the artist can form the tree with its unique aesthetic. The examples presented here are neither a technical guide nor a manual; rather, they offer the reader an opportunity to use the tree's specific characteristics as a source of inspiration.

An authentic Indian bonsai aesthetic begins not with style but with understanding the tree.

Image 29: Broad canopy

Why These Species?

These species mentioned in this chapter were not selected on the grounds of popularity, nor were they picked based on whether or not they are ideal choices for bonsai planting. Instead, these particular species have been highlighted as they showcase a unique ecological strategy, each of which represents an essential principle that is necessary in understanding the fundamentals of the Indian bonsai aesthetic.
The banyan (*Ficus benghalensis*) explains the importance of space; the tamarind (*Tamarindus indica*) showcases the process of refinement; the neem (*Azadirachta indica*) demonstrates adaptability, and the water jasmine (*Wrightia religiosa*) illustrates how grace and delicacy can emerge from biological form.
Collectively, they show that aesthetics are not dictated by stylistic preferences but rather by keen observations of trees and the way they have evolved to deal with their surroundings.

Case Studies

The Banyan (*Ficus benghalensis*)

1. The Tree in Nature

The *Ficus benghalensis*, the national tree of India, is one of the most iconic species of the country's tropical regions.
Unlike the large conifers of temperate zones, which exhibit continuous vertical growth, its majesty stems from the lateral expansion of its crown, supported by aerial roots that transform into secondary trunks. Over time, it can spread over several thousand square meters, becoming a complete ecosystem that provides shelter for humans, animals, and plants alike.
Its growth strategy is therefore not a quest for height, but a quest for space.

This architecture corresponds to the modular tree model described by Francis Hallé, Roelof A.A. Oldeman, and P.B. Tomlinson, in which growth is organized through repeated architectural units rather than a single dominant axis.

2. What the Tree Teaches Us

The banyan is characterized by several fundamental features.

- A sympodial architecture.

- Weak apical dominance.

- The progressive multiplication of growth axes.

- A broad, spreading canopy.

- Aerial roots that become secondary trunks.

- Nearly continuous growth under tropical conditions.

The tree does not rest on a single apex. Its balance results instead from its numerous branches and secondary trunks.

In Hallé's architectural framework, this corresponds to a sympodial system characterized by weak apical dominance and progressive axis multiplication.

3. Ecological Meaning

In its natural habitat, this architecture offers several ecological advantages.
Its horizontal expansion increases the photosynthetic surface,creating a canopy that reduces soil evaporation. The aerial roots reinforce the heaviest branches.The tree can continue to grow without relying on its central trunk.
Its extension is not only vertical but in all directions across 180°.
(This horizontal expansion corresponds to an architectural strategy identified by Hallé as a canopy-based growth system optimized for surface occupation rather than vertical competition.)

4. Implications for Bonsai Design

These observations allow us to reflect on the aesthetic to be achieved.
Trying to give the banyan tree a single apex triangular silhouette causes the characteristics that define its biological identity to disappear.
Conversely, a form inspired by its natural architecture would express:

This interpretation is consistent with Jerry Meislik's observations on Ficus species, which demonstrate strong regenerative capacity through back-budding and aerial root formation, allowing structural development that differs fundamentally from temperate bonsai species.

- A broad canopy.
- Multiple primary axes rather than a single leader.
- Branching that reflects the tree's gradual lateral expansion.
- The integration of aerial roots as components of the composition.

The objective is not to reproduce a full-sized banyan, but to preserve the essential principles of its architecture.

This theory is in agreement with the observations of Jerry Meislik, who has proved that the biological properties of Ficus plants, such as vigorous back budding, aerial root formation, and continuous growth, enable them to take different shapes than those of temperate bonsai plants(Meislik, 2019).

5. Aesthetic Reflection

The banyan tree teaches us that imposing presence does not always lie in verticality.
Its presence arises from the balance between expansion and stability. Its aesthetic evokes shelter, creating a space beneath its canopy that offers protection, coolness, and permanence.
For us bonsai practitioners, this lesson is fundamental. The form must be dictated by the species. It must emerge from an understanding of its biology. The banyan reminds us that attentive observation is the starting point of all creation.

Image 30: Ficus benghalensis Vinayaraj, CC BY-SA 3.0 <https://creativecommons.org/licenses/by-sa/3.0>, via Wikimedia Commons

The Tamarind (*Tamarindus indica*)

1. The Tree in Nature

The tamarind tree is one of the oldest and hardiest trees in India. It is found in villages and fields, near temples, and along roadsides, and is renowned for its great longevity.
The tamarind tree grows slowly. Over time, it develops a broad, rounded crown. Its trunk is relatively short and thick, and its branches are finely ramified. Its elegance stems not from rapid growth, but from the gradual accumulation of countless seasons.
His slow cumulative growth corresponds to Hallé's model of long-term architectural stabilization, where structure is progressively refined through repeated seasonal iterations.

The tamarind tree is a tree that embodies time.

2. What the Tree Teaches Us

The tamarind reveals several distinctive characteristics:
- Slow and steady growth.

- Strong trunk development.

- Fine and intricate ramification.

- A broad, rounded crown.

- Excellent tolerance to pruning.

- Exceptional longevity.

The tamarind has a rather slow growth, fine branching structure, and
ramification. Each branch contributes to forming a harmonious silhouette, creating an impression of maturity and balance.
Its beauty and refinement develop over time. Exuberant growth is not one of its characteristics.

3. Ecological Meaning

In its natural environment, it is remarkably resilient. It withstands prolonged drought, intense heat, and poor soils. Its dense canopy provides shade, moderating the microclimate beneath it. It offers protection to people, livestock, and wildlife.
Because its growth is slow, its wood is very durable, and its crown is well-balanced.
The tamarind teaches that resilience is built through patience.

4. Implications for Bonsai Design

The structure of the tamarind tree suggests we have an approach focused more on maturity than on exaggerated movement. Rather than prioritizing important trunk curves or very codified silhouettes, its formatting might seek to express :
- A powerful, time-weathered trunk.

- Fine, delicate ramification.

- A generous rounded canopy.

- A visual balance between strength and refinement.

- An overall impression of age and quiet permanence.

The objective is not to accelerate the appearance of age artificially, but to cultivate the qualities that naturally emerge through time.

5. Aesthetic Reflection

The tamarind reminds us that beauty is often the result of patience.
Its character is not shaped by spectacular growth but by the quiet accumulation of countless small changes over many years. Every branch, every scar, and every refinement tells the story of time rather than transformation.
For the bonsai artist, the tamarind offers a profound lesson. It encourages restraint, careful observation, and respect for gradual development. Rather than forcing rapid results, it invites us to accompany the tree through time, allowing maturity to become the true source of beauty.
In this sense, the tamarind teaches that an authentic bonsai is not created in a moment. It is cultivated over a lifetime.

Image 31: Tamarindus indica

HannoSEA, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons

The Neem (*Azadirachta indica*)

1. The Tree in Nature

Azadirachta indica, or neem, is one of the most widely distributed tree species on the Indian subcontinent. It is known for its medicinal value and resistant capacity that undertakes such conditions which cannot be withstood even by the majority of the trees. From parched flats to village road edges, the neem tree has become a badge of self-reliance.
In contrast to those species that require abundant water or fertile soils, the neem grows under conditions of extended drought, severe heat, and nutrient-poor substrates. Its gnarled crown with fissured bark and leaves that never fall tells the story of a life lived through adaptability, not ease.
Neem is a tree that shows the power of resilience.

2. What the Tree Teaches Us

The neem reveals several fundamental characteristics:

- Exceptional drought tolerance.

- Continuous adaptation to environmental stress.

- A broad, irregular canopy.

- Fine branching with moderate apical dominance.

- Strong regenerative capacity following pruning.

- Remarkable longevity under harsh conditions.

(Within Hallé's architectural model, this represents a highly plastic system in which morphological form is continuously adjusted in response to environmental constraints.)

Rather than adopting perfect symmetry, the neem develops a dynamic and balanced architecture. It reflects the tree's constant interaction with its environment.
Its form is shaped by adaptation rather than uniformity.

3. Ecological Meaning

In its natural habitat, the neem plays an essential ecological role. Its extensive root system enables it to exploit limited water resources, while its dense foliage provides shade and improves local microclimatic conditions. Its leaves, seeds, and bark contain biologically active compounds that contribute to its resistance against numerous pests and diseases.
The neem is an image of long-term survival that depends not on ideal conditions but on resilience. Its plasticity allows it to continuously adapt to the environment.
Its architecture is therefore the visible expression of ecological resilience.

4. Implications for Bonsai Design

Observing the neem encourages a design philosophy that values natural irregularity and structural authenticity. Rather than pursuing rigid symmetry or highly formal compositions, a bonsai inspired by the neem may seek to express:

- A naturally irregular crown.

- A robust and weathered trunk.

- Fine branching that reflects continuous adaptation.

- Deadwood or bark textures, when naturally present, that suggest endurance.

- An overall impression of vitality despite environmental constraints.

The goal is not to exaggerate the marks of time, but to show the strength that enables the species to thrive in demanding conditions.

5. Aesthetic Reflection

The neem tree holds lessons for us: beauty lies where perfection does not exist.
For us bonsai practitioners, the neem invites us to reproduce reality as it is, rather than an idealized version. It reminds us that a tree reveals itself not only through its form but also through its story of adaptation.
In this sense, the neem teaches that resilience itself can become an aesthetic principle.

Image 32: Azadirachta indica PJeganathan, CC BY 4.0 <https://creativecommons.org/licenses/by/4.0>, via Wikimedia Commons

The Water Jasmine (*Wrightia religiosa*)

1. The Tree in Nature

Wrightia religiosa, commonly known as the Water Jasmine, is a small tropical tree native to Southeast Asia and widely cultivated throughout the Indian subcontinent. Unlike the imposing banyan, it rarely dominates the landscape. Instead, it attracts attention through its delicate branching, elegant proportions, and fragrant white flowers.
Growing naturally along riverbanks and in humid environments, the species develops a slender trunk supporting numerous fine, pendulous branches. Its light canopy responds gracefully to the slightest breeze, creating an impression of constant movement.
Its beauty is expressed through elegance rather than scale.

2. What the Tree Teaches Us

The Water Jasmine reveals several distinctive characteristics:

- Naturally fine ramification.
- Slender trunk and delicate branches.
- Graceful, pendulous shoots.
- Small leaves suited to miniaturization.
- Continuous flowering under favourable tropical conditions.
- A naturally balanced and harmonious silhouette.

(This corresponds to a high-resolution architectural model in Hallé's system, characterized by fine branching and high articulation density.)

Rather than expressing strength through massive structure, the tree achieves visual harmony through proportion, rhythm, and subtle movement.
Its architecture demonstrates that refinement can be as expressive as power.

3. Ecological Meaning

In its natural habitat, the Water Jasmine occupies humid environments where continuous growth allows the renewal of fine shoots and foliage throughout much of the year. Its flexible branches reduce mechanical stress while enabling efficient use of available light.
Its modest dimensions do not represent ecological weakness. Instead, they reflect an alternative strategy based on efficiency, flexibility, and continuous renewal.
The Water Jasmine teaches that adaptation may be achieved through elegance rather than dominance.

4. Implications for Bonsai Design

The natural architecture of *Wrightia religiosa* suggests a bonsai that celebrates refinement rather than dramatic structure.
A composition inspired by the species may seek to express:

- Graceful trunk movement.
- Fine and intricate ramification.
- Soft, naturally flowing branch lines.

- An open canopy that allows light to pass through.

- Delicate proportions that preserve the species' inherent elegance.

Rather than forcing the tree into a rigid geometric silhouette, the design should preserve its natural sense of rhythm and lightness.
The objective is not to exaggerate movement, but to reveal the quiet elegance already present in the species.

5. Aesthetic Reflection

The Water Jasmine reminds us that beauty is not always found in grandeur.
Its quiet elegance, delicate branching, and seasonal flowers demonstrate that harmony can emerge from restraint as much as from strength. Every branch contributes to an impression of balance without seeking visual dominance.
For the bonsai practitionners, this species offers an important lesson. Refinement is not achieved by reducing complexity, but by allowing every element to find its natural place within the composition.
In this sense, the Water Jasmine teaches that grace is not an ornament added to form—it is the natural expression of a tree living in harmony with its own architecture.

Image 33: Wrightia religiosa

PART IV: THE DHARMA OF THE TROPICAL TREE: TOWARDS AN AUTONOMOUS AESTHETIC.

CHAPTER 1: Vrikshayurveda as a modern ethic.

In temperate regions like Japan and Europ, bonsai is celebrated as a living art form in which the artist guides nature to express a distinct, highly codified aesthetic. The practitioner carefully refines, following precise rules, the foliage, branches, trunk, and *nebari* to evoke an ancient tree weathered by time. Specialized techniques allow for the incorporation of elements such as *jin* (sculpted deadwood branches) or *shari* (a partially stripped trunk), while the tree's silhouette is balanced to form a harmonious, asymmetrical triangle. Through this meticulous shaping process, the artist captures the essence of a majestic wild tree sculpted by decades of wind and the elements.
This approach is ideally suited to trees from temperate regions. The techniques employed and the resulting styles are the product of centuries of practice by Chinese and Japanese masters.

The question that tropical bonsai enthusiasts should ask themselves is this: What is the specific nature of this tree, and how can I, in my own small way, encourage its growth and showcase its full potential?
When you meet someone for the first time, to judge their character, you have to know all their facets. The same is true for bonsai trees. You have to consider it from all angles to begin to understand it.

Simply by asking oneself this question, the state of mind changes; one is faced with a living being that must be accompanied so that it reveals itself in its true tropical nature.

The vision of life expressed in the Vrikshayurveda resonates in the work of Vandana Shiva (Earth Democracy: Justice, Sustainability, and Peace, South End Press, 2005). For this Indian ecophilosopher, the plant kingdom is not simply a resource to be exploited, but rather living beings participating in the same ecological community as we do. This concept resonates deeply with the spirit of the Vrikshayurveda. The tree is a being worthy of respect, attention, and even moral consideration. Through this lens, bonsai can be perceived not only as a horticultural art, but as a dialogue with life itself.

From command to accompaniment: this is one of the foundations of Vrikshayurveda, an ancient ethic that considers the tree, the plant, and vegetation as active entities of their own destiny, rather than as passive objects of human design.

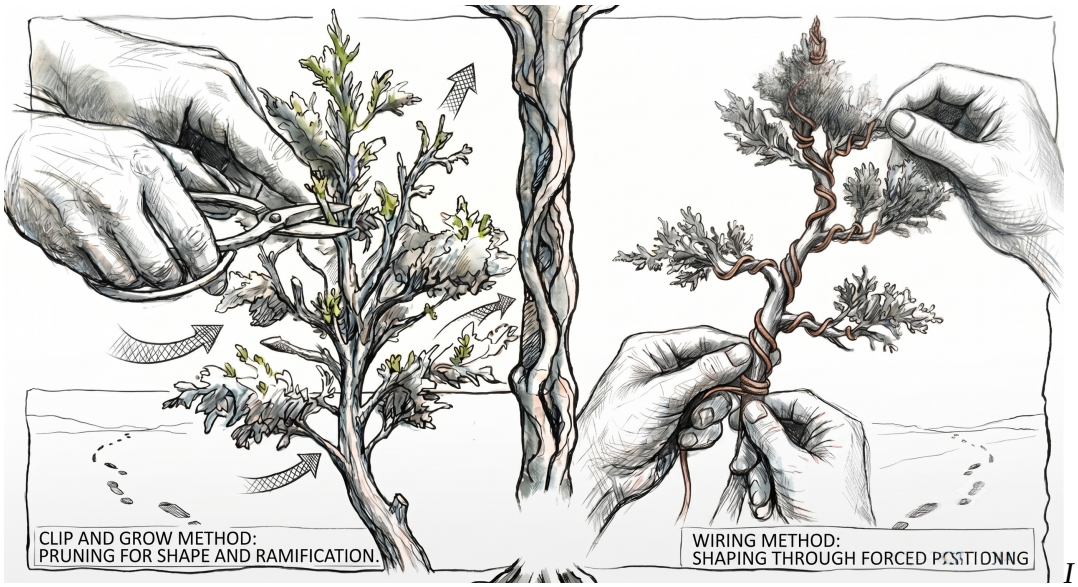


Image 34: Wiring/clip and grow

Vrikshayurveda principles

Table 9: Vrikshayurveda principles

Principle Category	Focus Area	Description
Soil Management	Bhumi-nirupana	Classifying soil based on moisture and mineral content (e.g., arid, marshy, ordinary) and choosing appropriate land based on indicators of fertility.
Plant Biology	Padapavivaksa	Recognizing that plants have life, senses, and biological rhythms that mirror human health, governed by the three doshas (Vata, Pitta, Kapha).
Propagation	Bijoptivithi	Scientific methods for seed selection, processing, and storage, as well as propagation through stalks, cuttings, and tubers.
Nurturing	Nisecanavidhi	Use of organic, fermented fertilizers like Kunapajala (fish/animal waste) and Panchagavya (cow products) to boost immunity and soil health.
Disease Control	Plant Pathology	Managing pests and diseases through natural, locally available ingredients rather than synthetic chemicals.
Seasonal Alignment	Kala	Synchronizing planting, pruning, and harvesting with natural seasonal rhythms to maximize vitality, yield, and longevity.
Water Management	Jala	Locating groundwater sources and utilizing water conservation techniques like building reservoirs and efficient irrigation.
Ethical Care	Compassion	Treating plant care as a practice of empathy, where the caretaker's dedication and ethical responsibility directly influence the plant's growth.

In Vrikshayurveda's holistic worldview, the nourishment of the plant is not the mechanical application of synthetic components (N-P-K ratios), but an act of culinary care aimed at supporting the living counterpart. The traditional concoctions such as Kunapajala—fermented nutrient broth, and Panchagavya—a systemic bio-stimulator using five sacred derivatives of the cow are regularly ridiculed in modern industry-based horticulture. But from the point of view of modern plant biology, these concoctions showcase an advanced knowledge of microbes and organic cooperation. For the modern tropical bonsai hobbyist, dealing with these concoctions requires a lot of listening. While conventional fertilizers can easily burn the roots in small pots exposed to temperatures of 40°C, these organic concoctions have zero risk of burning. They organically adhere to the tropical substrate such as biochar and coco chips, making the whole pot a micro-ecosystem in itself.

CHAPTER 2: Learning the language of the species.

When you want to work with a tree as a bonsai, the first thing to do is not only to know the genus and species to which it belongs but also its morphotype and inherent constitution.
Each tree carries within it the history of the environment in which it grew; as researchers have noted, the growth and development of such an organism is an "integrated phenomenon" deeply dependent on its specific environmental history (Perry, 1982). This is why a tree that has been collected from the wild cannot be treated in the same way as a tree from a nursery or a seedling grown in a greenhouse. (Hourigan, 2019).
Hence, we must know both the basic rules of genus and species (1. The Mirror of Your Own Limitations) and also its history (2. The Mirror of Environmental Truth). Knowing the biography of the specimen we want to study allows us to understand it and guide it along the path it has already opened.

1. The Mirror of Your Own Limitations

Here we must address the Linnaean classification system.
The problem with Linnaeus's classification system was that organisms were named after their physical characteristics, which caused confusion and classification errors (Schuh, 2003). As many historians of science have noted. Although its binomial nomenclature was a notable advance, it often failed to reflect the true relationships between species, or those between species and their environment. This issue became apparent as scientific knowledge evolved, revealing the complexity of biodiversity. Actually, the same genus of tree can exhibit different foliage, morphology, and even biological characteristics depending on the environment in which it grew and evolved (Sultan, 1995).
It is true that modern science has surpassed this limit by using phylogeny (Vences, M., et al.). But in the small world of bonsai, there are few people familiar with this new system of study; many still use Linnaeus's true but imperfect and limited system.
An indisputable fact is that long before the 18th-century European classification, on the Indian subcontinent a classification existed based on the physical characteristics of plants but also on their dynamic relationship with their environment, which has been codified in the “Vrikshayurveda."
There are indeed tools available in the field of bonsai to facilitate the maintenance of a given variety. All enthusiasts of this art are certainly familiar with the maintenance guides found in specialized books or on dedicated websites.
But what exactly are these tools?
They are generally standardized recommendations based on a climate average specific to the geographical location in question. They are, one might say, normalized.
It's an "abstract" model, not a biological reality. They postulate that two trees with the same name have the same needs. It may become misleading when applied without considering the environmental history of the tree.

2. The Mirror of Environmental Truth

Unlike taxonomy and maintenance sheets, Vriskayurveda offers us a much more interesting alternative and, above all, much more grounded in reality. (Verma, M. 2025)
What does this consist of?
Knowledge of the environment from which the tree we will guide in its transformation into a bonsai originates is paramount.
If it comes from a greenhouse where the temperature is monitored to the degree, or if it was imported from another country, what type of substrate was it planted in? How often was it watered? What fertilizer was it given? Was it obtained through cuttings, seeds, layering, etc.? (Sadhale, N. 1996).
All these parameters are extremely important; they trace your subject’s biography. Consequently, they also describe its needs and how it will develop. This leads us to view our tree not so much as an object with instructions (maintenance sheet) but as a partner that will guide us to transcend its true nature.
We can therefore deduce that the first thing to do when a young plant, a cutting, a seedling, or anything else enters our collection is to do nothing but observe it. Observe it to understand what it needs and listen to what it is asking for. (Gupta, V. 2026).

3. The Mirror of Your Partnership

Now that we know the Linnaean classification of our tree and its biography, we have to work together to achieve the full development of our bonsai without too much constraint.
We arrive at a point where we start the partnership. The results of our observations must now be transformed into action. Our role is to guide the tree; never forget that. Facilitate its form development not with external constraints but through a continuous dialogue. I act (pruning, wiring, or repotting…), the tree reacts (color of the leaves, vigor of the growth…). Observation of the reaction will teach us if it's the right thing to do or not. If we notice we're heading in the right direction, we continue along that path. Otherwise, we modify our approach by trying a different method (different timing, less severe pruning, substrate adaptation, etc.). We are not working on a static object, but with a living being who is, we can say, our partner. We seek for the tree's full expression while respecting the limits of its own vital rhythm. This requires patience to wait for the reaction of the tree, sensitivity to understand it, and humility to accept the rejection of our proposal. This rejection is not a failure, it is the tree asserting its autonomy.

This partnership between tree and practitioner doesn't stay at the door of the nursery or greenhouse when one goes back home. It stays in the mind and silently interferes in our day-to-day life. The lessons learned in this dialogue and collaboration push us to reconsider our place within the living world.

At the end of the day, this dialogue with the tree transcends the pot and the shelf and the tree itself. By working with the bonsai not as a subject to be constrained, but as a living partner that we have to understand, we cultivate in us a practice of observation that naturally flows outward into our daily lives.When we learn to comprehend the language of a tree, noticing the subtle change in a leaf’s turgescence under the sun or the quiet suffering of a root system, we are doing more than developing an aesthetic eye.
We are awakening our conscience to the environment. This practice serves as a foundation for empathy. By discovering that a plant has its own vital rhythm that is independent of our desires or exigencies, we are invited to adopt an attitude in opposition to anthropocentrism. Rather than emphasizing mastery over form, this approach places greater emphasis on dialogue with the biological tendencies of the tree. We tend to develop a profound respect for the autonomy of all living beings.This renders us more humble and awakens us to eco-responsibility.

Image 35: Partnership

Traditional vs. Partnership Approaches in Bonsai Cultivation

Table 10: Traditional vs. Partnership method

Feature	Traditional / Extrem guidance Method	Partnership / Vrikshayurveda Method
Philosophy	The tree is frequently guided toward a pre-established aesthetic	The tree is an autonomous participant; the artist facilitates its natural potential.
Human Role	Steward of Form: The artist interprets the tree through an established aesthetic framework.	Accompanist: The artist guides and nurtures the tree's innate expression.
Growth Habit	Pruned and wired to emphasize a clearly defined architectural structure derived from classical bonsai styles.	Respected: Growth habits are shaped to complement the tree's tropical biology.Light wiring.
Ethical Basis	Aesthetic perfection and highly codified design approach.	Collaboration, health, and honoring the tree's life force (Prana).
Time Orientation	Fixation on achieving a "finished" look quickly.	Patience; growth is a dialogue that unfolds over the long term. Fostered by rapid growth.
Aesthetic Result	Often standardized, stereotyped, and structured Training Method .	Unique, organic, and evocative of the tree's natural environment.

PART V: THE VOICE OF THE INDIAN MASTERS

Introduction

Bonsai cultivation requires, above all, a mastery of the art of patience. While the practice originated in the Far East, India has developed its own dynamic and original version, adapting to the vitality of tropical flora rather than adhering to another tradition.

In this fifth chapter, we move from theory to practice by meeting three bonsai masters from India. By answering five key questions, these experts share their vision and personal approach to cultivating bonsai in an extreme, harsh climate, ranging from the heat preceding the monsoon to the torrential rains that follow.

See for yourself how these artists have transformed the art of bonsai, demonstrating that true expertise lies in understanding the plant from within.

Questions to Manoj Kumar

1. Defining the Core Philosophy of the Indian Aesthetic

"For decades, the global bonsai community heavily relied on modern Japanese bonsai tradition rules and species. When we look at the emergence of a distinct Indian bonsai style, how do we define its core philosophy? Is it purely a celebration of tropical vitality and growth habits, or is it a deeper reinterpretation of classical artistic lines to match the spirit of the Indian landscape?"

2. Transitioning from Temperate Rules to Tropical Reality

"Many foundational bonsai principles were written for temperate conifers and deciduous trees—focusing on strict branch placement and slow, controlled growth. When working with iconic, hyper-vigorous tropical species like the Banyan (*Ficus benghalensis*), Tamarind, or Neem, which traditional rules had to be actively broken or rewritten to let the true botanical character of these trees shine through?"

3. Capturing Cultural and Spiritual Silhouettes

"Indian art, architecture, and folklore are rich with tree imagery, from the sprawling, sacred canopies of village assembly trees to the stylized forms in ancient miniature paintings. How does the emerging Indian bonsai style incorporate these cultural silhouettes? How can a practitioner intentionally capture that sense of ancient, spiritual presence in a containerized form?"

4. Navigating Environmental and Technical Innovations

"Developing a regional style isn’t just an artistic challenge; it’s an environmental one. Managing a collection through intense summer heat and heavy monsoons requires unique approach to soil architecture, specialized irrigation, and organic nutrition. What do you see as the most critical technical innovations developed by Indian practitioners to sustain healthy, long-term tropical bonsai?"

5. The Legacy of the Tropical Divergence Movement

"Pioneers like Nikunj and Jyoti Parekh laid incredible groundwork for tropical bonsai, proving that the art could thrive outside temperate zones. As a contemporary voice, where do you see the movement heading next? What steps does the Indian bonsai community need to take to ensure its unique aesthetic is fully recognized and celebrated on the global stage?"

Questions to Anupama Vedachala

1. Translating Botanical Science into Regional Artistry

"Your work spans both the artistic realm and the academic, particularly through your training of graduates and postgraduates at the GKVK Agricultural University. When we look at defining a distinct 'Indian Bonsai Style,' how much does a deep, scientific understanding of tropical horticulture guide the artistic choices? How can academic insights into tropical plant physiology help local practitioners confidently break away from traditional temperate design templates?"

2. The Public Silhouette: Curating the Indian Landscape at Lalbagh

"You served as the principal designer and curator for the historic revamp of the Lalbagh Bonsai Garden, an incredible public space showcasing specimen trees aged up to a century. When designing a public gallery meant to represent bonsai to both India and the world, how did you select and style these trees to tell a uniquely Indian story? What visual elements did you emphasize to show the public that this art form belongs fundamentally to the tropical Indian landscape?"

3. Elevating Local Species on the Global Stage

"From demonstrating at WORBAC 2026 in China and FELAB in Brazil to international platforms like Black Scissors, you have brought an Indian perspective to global audiences. When presenting to communities deeply rooted in Japanese *Gendai* or Chinese *Penjing* traditions, how do you articulate the emerging Indian aesthetic? What specific characteristics of our native tropical material do global audiences find most revelatory?"

4. Pioneering a Distinct Path as a Female Master

"The traditional global bonsai narrative has historically been dominated by male masters, yet you have built a celebrated 30-year career as a global educator, master, and founder of *Vedaavan*. How has your personal path and worldview as a female pioneer shaped your approach to the art? Do you feel that a shift toward a more inclusive, diverse community in India is actively fostering a more experimental, expressive regional style?"

5. Institutionalizing the Craft for Future Generations

"Through your leadership in vocational training with Skill India and your work at your studio, you are actively professionalizing bonsai instruction. To ensure the Indian bonsai style continues to evolve dynamically rather than stagnating, how must our educational frameworks change? How do we train the next generation of *Vedaavan* students to not just master technical maintenance, but to become standard-bearers for a highly recognizable, culturally authentic Indian aesthetic?"

Questions to Prajakta Kalle

1. Reclaiming the Roots of Vamana Vriksha Kala

"Your book and teachings lean heavily on the historical perspective that bonsai is fundamentally an ancient Indian art form—*Vamana Vriksha Kala*—that was carried across Asia by monks before being lost at home. When we look at the modern emergence of a distinct 'Indian Bonsai Style,' how much of it is about inventing something entirely new, and how much is about spiritually and artistically reclaiming an ancestral heritage?"

2. Translating a World-Record Scale into an Aesthetic Movement

"You hold the Guinness World Record for the largest collection and display of bonsai trees in the world, nurturing over 3,300 trees across more than 150 species at your garden in Pune. When managing an artistic collection of this massive, unparalleled scale, how do you see the collective voice of these trees defining an Indian identity? How does our incredible biodiversity—housing over 15,000 native species compared to Europe's 1,500—fuel a uniquely varied regional style?"

3. The Shift from Classical Mastery to Tropical Adaptation

"Your personal journey began in 1984 with a sacred Banyan tree (*Ficus religiosa*), and you later studied deeply under global masters like Rudy Najaon of Indonesia. Given your experience adapting classical Japanese, Penjing, and Indonesian styles to the Indian climate, what unique structural or stylistic features define a truly 'Indian' silhouette? How do our native ficus, tamarind, and phyllanthus varieties reject traditional temperate styling rules?"

4. Bonsai as a Vehicle for Social and Rural Empowerment

"Through *Bonsai Namaste*, you have beautifully aligned high art with grassroots social impact—specifically working to train rural and tribal women through the Skill India initiative to turn bonsai into a dignified livelihood. How does introducing the art form to individuals who live so close to nature change the way it is practiced? Do you find that their innate connection to the land brings a fresh, unpretentious, and uniquely authentic spirit to the Indian bonsai aesthetic?"

5. Cultivating Global Recognition through Landmark Movements

"The historic 2018 *Bonsai Namaste* convention in Pune brought together global masters and hundreds of thousands of visitors, effectively shifting the eyes of the international bonsai community toward India. To firmly cement the Indian style on the global stage, what is the next step for our practitioners? How do we transition from being a country that masters *global* techniques to being recognized worldwide as the absolute standard-bearers of our own distinct, tropical school of art?"

CONCLUSION

The living horizon

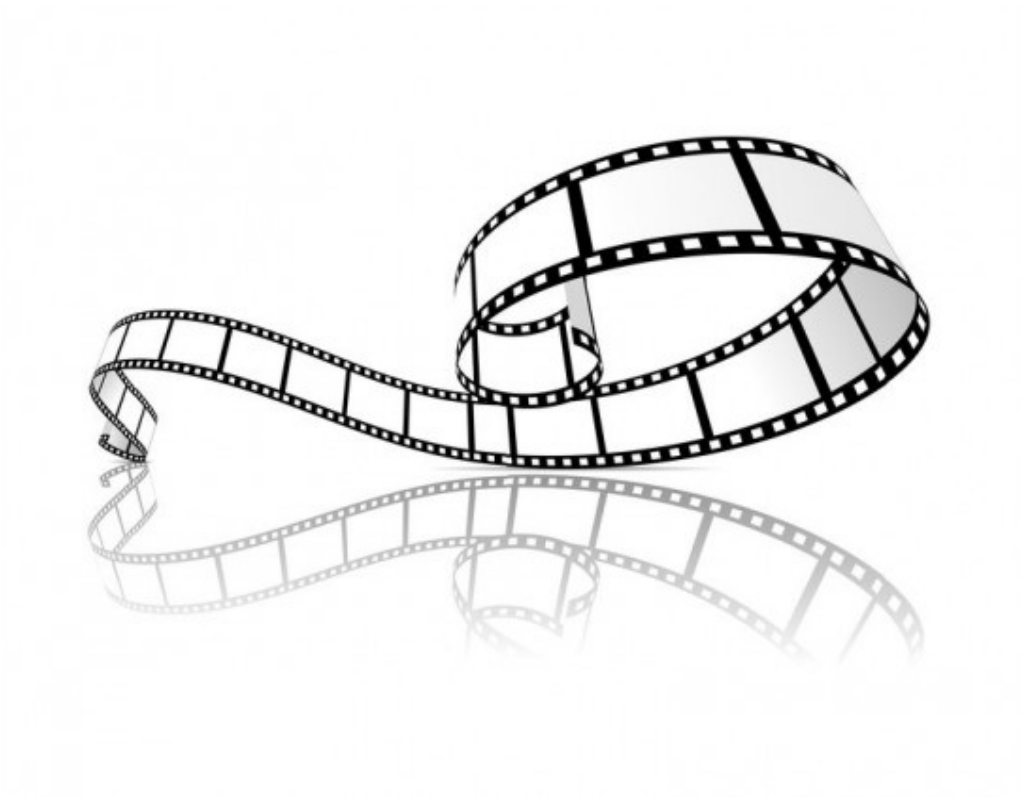
Looking toward the future, the art of bonsai in India must go beyond simply imitating ancestral Japanese practices. We must prioritize observing and listening to the tree. Our trilogy, tree, substrate, and pot, requires human hands as the fourth element, implementing the directives dictated by the tree itself and the environment. Under these conditions, the tree can easily express its natural biological character. It is no longer obliged to conform to a geometry that is not its own. The trilogy aligned with the principles of Vrikshayurveda through the guided hand of the practitioner, the bonsai becomes more than a horticultural specimen, it becomes a partner

A new path for the profession.

Adopting this thesis as a foundation for newcomers and ourselves would take apart the obstacles created by trying to follow Japanese canons for tropical species. By educating students to listen and observe the trees rather than forcing them into a standardized style, we take away the sources of frustration associated with beginner failure, thus also eliminating the possibility of giving up. This would allow and/or promote the democratization of the art of bonsai. This change does not just benefit the individual, it can be a factor of development for professionals in our sector. The practice becoming more accessible and aligned with environmental realities opens the possibility of growth opportunities for nurseries, potters, and educators. Ultimately, this growth will benefit the professional environment and certainly lead to job creation.
The horizon of Indian bonsai is wide and full of promises; it is waiting for those who are ready to learn its language.

Image 36: The Horizon of Indian Bonsai

Bonsai gallery



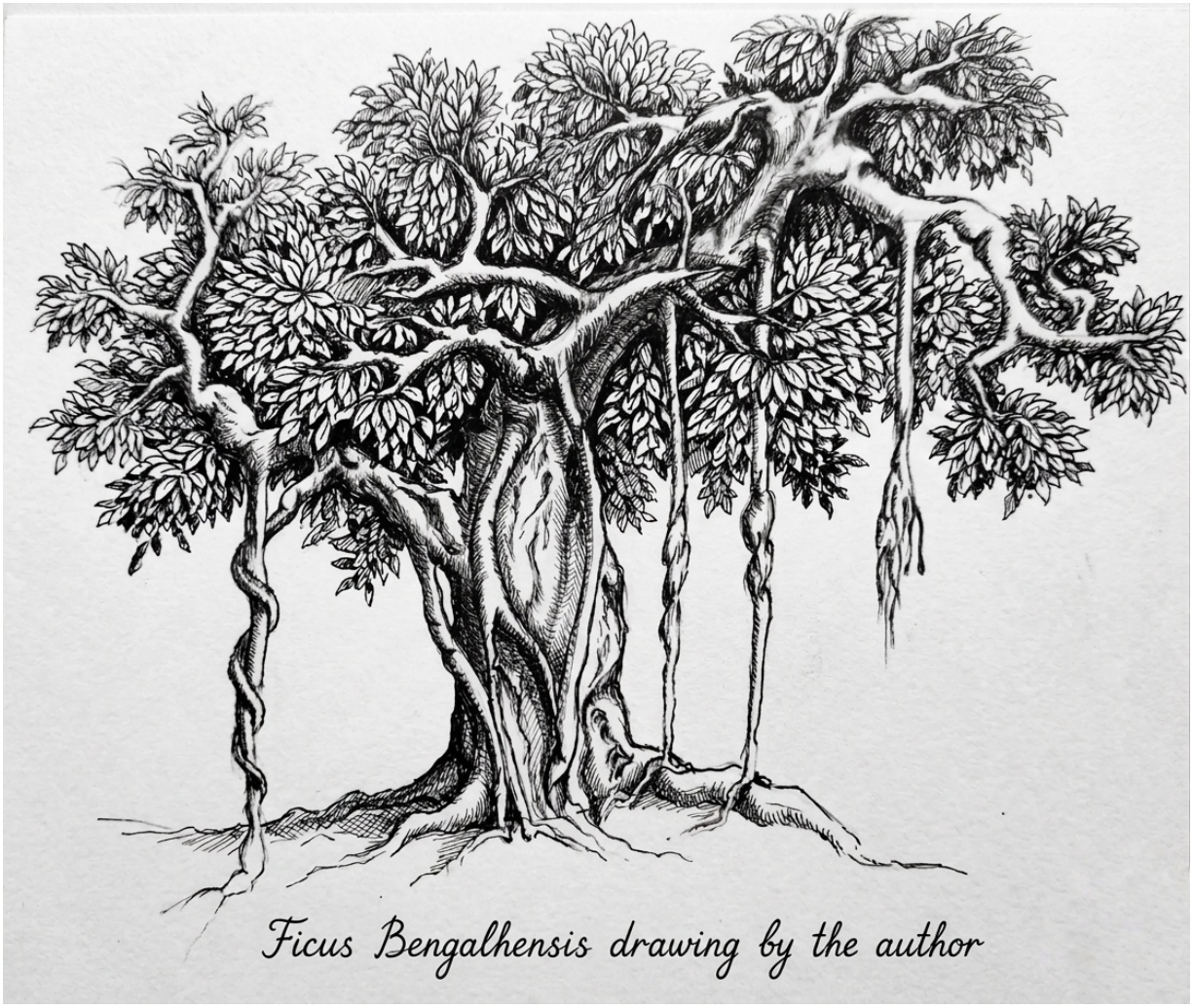


Image 37: Ficus benghalensis Indian style

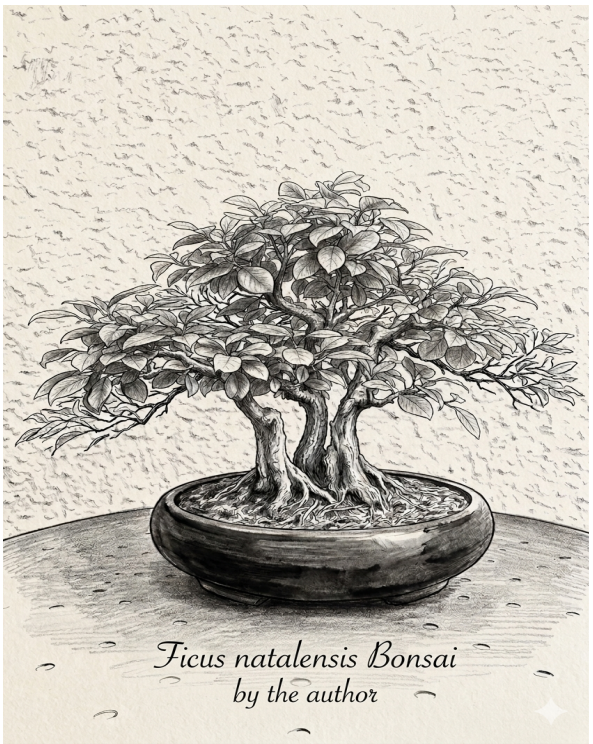


Image 38: Ficus natalensis Indian style

Image 39: Ficus microcarpa

Image 40: Penjing By Manoj Kumar at Mysore bonsai garden ©

Image 41: Ficus retusa at mysore bonsai garden ©

Image 42: Ficus infectoria

Image 43: Ficus rumphii at Mysore bonsai garden ©

Image 44: Ficus microcarpa By Master Veer Choudhary ©

Image 45: Tamarindus indica at Mysore bonsai garden ©

Image 46: Ficus amplissima ©

Image 47: Ficus rumphii ©

GLOSSARY

Accompaniment
The central ethical principle of the Indian bonsai aesthetic. Rather than imposing a predetermined design upon a tree, the practitioner observes, guides, and collaborates with the tree's natural tendencies, allowing its biological character to emerge.

Akadama
A traditional Japanese fired clay aggregate widely used in bonsai cultivation. Valued for its balance of drainage and water retention in temperate climates, it may break down rapidly under intense tropical heat and monsoon conditions.

Apical Dominance
The biological mechanism by which a terminal bud suppresses the growth of lateral buds, encouraging vertical growth and the development of a dominant central trunk.

Autonomous Aesthetic
An artistic framework that develops according to its own environmental, biological, and cultural realities rather than relying on imported conventions. In this treatise, the term refers to the emergence of a distinct Indian bonsai identity.

Biography of the Tree
The complete environmental history of a specimen, including its origin, cultivation conditions, propagation method, and developmental experiences. This history influences how the tree responds to cultivation and design.

Burton Style (Cosmic Bonsai)
An experimental bonsai movement created by Laurent Darrieux and Hervé Dora that rejects naturalistic constraints and traditional Japanese conventions in favor of imaginative, fantastical forms.

Canopy Architecture
The overall structure and arrangement of a tree's branches and foliage. The treatise argues that tropical species naturally develop broad, spreading canopies rather than the triangular silhouettes favored in traditional Japanese bonsai.

Decurrent (Deliquescent)
A growth form characterized by repeated branching and the absence of a dominant central trunk. The resulting silhouette is broad, spreading, and dome-shaped.

Environmental Truth
The principle that a tree's development can only be fully understood by considering the environmental conditions that shaped its growth.

Evaporative Cooling
A natural cooling process produced when water migrates through porous terracotta and evaporates from the pot's exterior, lowering root-zone temperatures.

Excurrent
A growth form characterized by a dominant central trunk that extends upward throughout the life of the tree, producing a conical silhouette.

Indian Bonsai Aesthetic
A proposed bonsai philosophy rooted in India's tropical ecology, indigenous plant knowledge, and cultural traditions. It emphasizes biological authenticity, environmental adaptation, and partnership with the tree.

Living Horizon
A metaphor describing the future development of Indian bonsai as an evolving and open-ended practice shaped by observation, experimentation, and respect for tropical species.

Macroporosity
The presence of large interconnected pores within a material. In traditional terracotta pots, macroporosity promotes drainage, aeration, and cooling.

Microporosity
The presence of very small pores within a material. High-fired ceramics possess microporosity, which provides controlled moisture retention but reduced evaporative cooling.

Monopodial Growth

A growth pattern governed by strong apical dominance in which one central axis continues to extend upward. Common in many conifers and frequently associated with classical bonsai design.

Morphotype
The characteristic physical structure and growth habit of a plant resulting from both genetic inheritance and environmental influences.

Naturalistic Style
A bonsai movement associated with Walter Pall that seeks to reproduce the appearance of mature wild trees rather than idealized traditional forms.

Partnership Method
A cultivation philosophy in which the practitioner and tree are viewed as active participants in a shared developmental process. Decisions are guided by observation and response rather than strict formulas.

Penjing
The ancient Chinese art of creating miniature landscapes and trees. Penjing predates Japanese bonsai and historically explored a broader range of artistic expressions and natural forms.

Phenotypic Plasticity
The capacity of a plant to modify its growth, structure, and behavior in response to environmental conditions while retaining the same genetic identity.

Plant Intelligence
The concept that plants continuously perceive, evaluate, and respond to environmental stimuli through complex physiological processes, allowing adaptive decision-making without a nervous system.

Prana
A Sanskrit term meaning "life force" or vital energy. Within the context of this treatise, it refers to the living vitality that should be preserved and encouraged through bonsai cultivation.

Sympodial Growth
A growth pattern in which the terminal bud ceases development and lateral branches assume dominance. This process creates wide, spreading crowns typical of many tropical species.

Tree Biography
See *Biography of the Tree*.

Tropical Canopy
A broad, horizontally expansive crown structure developed by many tropical trees to maximize light interception and create shade.

Tropical Divergence
The process by which tropical bonsai practice departs from temperate Japanese and European models due to differences in climate, biology, and cultural context.

Trilogy of Bonsai
The concept that bonsai cultivation depends on the interaction of three inseparable elements: the tree, the substrate, and the container. Human intervention acts as the fourth coordinating element.

Vrikshayurveda
The ancient Indian science of plant life and cultivation. In this treatise it serves as both a practical and ethical foundation for Indian bonsai, emphasizing observation, ecological awareness, compassion, and partnership with living organisms.

Hindi / Sanskrit Terms

Bhumi-nirupana (भूमि निरूपण)
Literally "examination of the soil." In Vrikshayurveda, the classification and evaluation of land according to its fertility, moisture content, mineral composition, and suitability for cultivation.

Bijoptivithi (बीजोप्तिविधि)
The science and methodology of seed selection, preparation, storage, germination, and propagation techniques described in Vrikshayurveda.

Dharma (धर्म)
A fundamental Indian philosophical concept referring to the inherent nature, duty, or rightful way of being of a living entity. In this treatise, it refers to respecting and supporting the natural character and growth tendencies of the tree.

Jala (जल)
Water. In Vrikshayurveda, it encompasses water management, irrigation practices, groundwater identification, and conservation methods.

Kala (काल)
Time or season. Refers to the synchronization of horticultural activities with natural seasonal rhythms and environmental cycles.

Kapha (कफ)
One of the three *Doshas* of Ayurvedic thought, associated with structure, stability, moisture, and nourishment. Vrikshayurveda applies these principles metaphorically to plant health.

Kunapajala (कुणपजल)
A traditional fermented organic fertilizer prepared from animal and fish products. Described in Vrikshayurveda as a powerful tonic for plant vigor and soil fertility.

Nisecanavidhi (निषेचनविधि)
Methods of nourishment and fertilization. Includes traditional organic practices intended to improve plant health and vitality.

Padapavivaksa (पादपविवक्षा)
The study and understanding of plant nature, growth patterns, biological functions, and life processes.

Panchagavya (पञ्चगव्य)
A traditional agricultural preparation made from five cow-derived products (milk, curd, ghee, urine, and dung), used as a biological stimulant and fertilizer.

Prana (प्राण)
Life force or vital energy. Within the context of this treatise, Prana symbolizes the living vitality of the tree that the practitioner seeks to preserve and encourage.

Vanaspati Shastra (वनस्पति शास्त्र)
Literally "the science of plants." A traditional Indian body of botanical knowledge that studies plants within their environmental, medicinal, and ecological contexts.

Vata (वात)
One of the three Ayurvedic *Doshas*, associated with movement, air, and change. Applied metaphorically in traditional plant science.

Pitta (पित्त)
One of the three Ayurvedic *Doshas*, associated with transformation, metabolism, and energy. Used within Vrikshayurvedic concepts of plant vitality.

Vriksha (वृक्ष)
Tree. The root word from which *Vrikshayurveda* is derived.

Vrikshayurveda (वृक्षायुर्वेद)
Literally "the Ayurveda of trees" or "the science of tree life." An ancient Indian system of horticultural and ecological knowledge that combines practical cultivation methods with an ethic of care and respect for living plants.

Additional Indian Terms Relevant to the treatise

Banyan (वट वृक्ष / Vat Vriksha)
The sacred fig (*Ficus benghalensis*), an iconic Indian tree characterized by aerial roots and vast spreading canopies. It serves as one of the principal biological models for the proposed Indian bonsai aesthetic.

Neem (नीम)
Azadirachta indica, a tree highly valued in India for its medicinal, ecological, and cultural importance.

Tamarind (इमली / Imli)
Tamarindus indica, a tropical tree noted for its spreading sympodial canopy and significance in Indian landscapes.

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ABOUT THE AUTHOR

Gilles Roszak is a horticulturalist, nursery manager and committed practitioner of the bonsai arts. After building a solid career in a different industry, Gilles eventually found his purpose and turned that into rigorous formal education: horticulture and nursery management. Retired from his professional career, he now spends his time mastering tropical bonsai and writing about horticultural philosophy.

He has been working with bonsai trees since the 1980s, having found out about the unique miniature varieties after a visit to the renowned Bonsai Zentrum Heidelberg in Germany.This excursion triggered a journey that transformed the precision of childhood scale model building into the living, breathing, and constantly evolving art form of bonsai.

Gilles has a strong affinity with India (his wife's home country) that helped shape is view of tropical bonsai. An activist style for reinterpreting bonsai aesthetics for tropical conditions uses local species (furthest from traditional temperate canons).

Based on the ancient Indian plant life philosophy Vrikshayurveda, he advocates "accompaniment" over "dominance," inviting practitioners to work with the unique biology of tropical trees.

Through his writing and practice, Gilles researches the possibilities of iconic trees like the banyan (Ficus benghalensis), tamarind (Tamarindus indica) and neem (Azadirachta indica).

He remains committed to establishing a distinct, authentic "Indian style" of bonsai that reflects tropical vitality, empowering a new generation of artists to embrace the beauty and rhythm of their own environments.

Project

- Volume I :*The Indian Bonsai Aesthetic* (theory and philosophy)
- Volume II :*Controversial Origin. Bonsai: The Contested Genesis*
- Volume III :

Imagine shedding the rigid parameters of traditional bonsai to embrace the very exuberance of tropical growth! Traditional bonsai follows established conventions that, in Japan and China, have set out a series of strict codes that aim to miniaturize trees in the image of their temperate or subalpine cousins.

But could the rectilineal, horizontal structure that has dominated for centuries work when confronted with the exuberant and unrestrained beauty of a banyan, tamarind, or neem tree?

This alternative viewpoint is what author, horticulturist, and artist Gilles Roszak sets out in “The Aesthetics of Indian Bonsai: Reinventing the Art of Bonsai, From Tropical Vitality to Cultural Form.” Far from controlling trees, this exciting article shows how we can move to become partners with them. Inspired by Vrikshayurveda (the ancient Indian science of plant care), this philosophy envisages plants not as raw materials but as living partners, actively engaged in their world.

This approach takes the natural forms, abundant foliage, and powerful root systems of tropical plants into account. This is not just a handbook but a powerful manifesto on the interplay of art and nature, charting the way towards a unique, authentic Indian approach to bonsai through the incorporation of local plant species and the rich cultural heritage of the subcontinent. Bonsai and plant lovers alike can draw on this insightful publication to develop a whole new appreciation for our favorite tree forms and throw off our own arbitrary limitations to create the most verdant examples of this stunning art form.